DEMOCRITUS AND THE SOURCES OF GREEK ANTHROPOLOGY

THOMAS COLE

AMERICAN PHILOLOGICAL ASSOCIATION

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By
THOMAS COLE
Yale University

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ABBREVIATIONS

Works which appear in the Selected Bibliography on pages 207–10 are cited in the footnotes in shortened form, omitting place and date of publication, and titles of articles in periodicals. A few works are cited by author's last name alone, as follows:

Brink, C. O., "*Οἰκείωσις* and *Οἰκειότης*: Theophrastus and Zeno on Nature in Moral Theory," *Phronesis* 1 (1956) 123–45.

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Uxkull-Gyllenband, W. von, *Griechische Kulturentstehungslehren = Bibliothek für Philosophie* 26 (1924).

Walbank, F. W., *A Historical Commentary on Polybius* (Oxford 1957).

* * *

OTHER ABBREVIATIONS

AGP	*Archiv für Geschichte der Philosophie*
AJP	*American Journal of Philology*
BPW	*Berliner philologische Wochenschrift*
CP	*Classical Philology*
CQ	*Classical Quarterly*
CR	*Classical Review*
DAWB	*Deutsche Akademie der Wissenschaften zu Berlin, Schriften der Sektion für Altertumswissenschaft*

FGrH	F. Jacoby, *Die Fragmente der griechischen Historiker* (1923–58)
HSCP	*Harvard Studies in Classical Philology*
JHS	*Journal of Hellenic Studies*
JRS	*Journal of Roman Studies*
MélRome	*Mélanges d'archéologie et d'histoire de l'École française de Rome*
MusHelv	*Museum Helveticum*
NGG	*Nachrichten der Gesellschaft der Wissenschaften zu Göttingen*
NJbb	*Neue Jahrbücher für das klassische Altertum*
NPU	*Neue philologische Untersuchungen*
PhilRev	*Philosophical Review*
ProcBritAc	*Proceedings of the British Academy*
PubblTorino	*Università di Torino, Pubblicazioni della Facoltà di lettere e Filosofia*
RA	*Revue archéologique*
RAC	*Reallexikon für Antike und Christentum* (Stuttgart 1950–)
RE	Pauly–Wissowa–Kroll, *Realencyclopädie der classischen Altertumswissenschaft* (Stuttgart 1894–)
REA	*Revue des études anciennes*
REG	*Revue des études grecques*
RendIstLomb	*Istituto Lombardo di Scienze e Lettere, Rendiconti, Classe di Lettere e Scienze Morali e Storiche*
RendLinc	*Rendiconti dell' Accademia dei Lincei*
RFIC	*Rivista di filologia e di istruzione classica*
RhM	*Rheinisches Museum für Philologie*
RPh	*Revue de philologie*
SIFC	*Studi italiani di filologia classica*
SO	*Symbolae Osloenses*
SVF	*Stoicorum veterum fragmenta*, coll. H. v. Arnim (Leipzig 1903–24)
TAPA	*Transactions and Proceedings of the American Philological Association*
TGF	*Tragicorum Graecorum Fragmenta*[2], rec. A. Nauck (Leipzig 1889)
VS	Diels-Kranz *Die Fragmente der Vorsokratiker*[9] (Berlin 1959–60)
WS	*Wiener Studien*

Publications of German and Austrian learned societies are indicated by:
Abh (=*Abhandlungen*), *Ber* (=*Berichte*) or *SB* (=*Sitzungsberichte*), followed by the city of origin.

INTRODUCTION

SOURCES AND METHODS IN THE STUDY OF ANCIENT *KULTURGESCHICHTE*

Discussions of Greek thought relating to the origins of culture often begin by distinguishing its two main currents, or counter-currents: the myth of the Golden Age and the myth of human progress—Hesiodic fantasy and Ionian science.[1] The dichotomy is fundamental and persistent, but it should not be allowed to obscure the fact that there did emerge, during the course of the fifth century B.C., a clear if limited victory for one of the two points of view. It was possible thereafter to debate the extent and significance of what had happened, or to seek more favorable terms for the defeated party; the victory itself was not called into question. Nowhere, in fact, is the effect of Ionian rationalism on the Greek mind more striking than in the success of its contention that the technological achievements of civilization are of a relatively recent origin, and that man's life was once far simpler and poorer materially than it is now. These opinions went almost unchallenged from the beginning of the fourth century until such time as the Judaeo-Christian doctrine of the Fall began to color ancient conceptions of prehistory.[2] In 400 B.C. it was still necessary for Thucydides to write a refutation of those who would exaggerate the scale and importance of the Trojan war; there is nothing comparable in what survives of later historical writing. Quite foreign to all serious discussions of the period are both the Hesiodic vision of a Golden Race living at the beginning of man's history and Homer's glorification of a vanished age of heroic power and splendor.[3] Primitivists might continue, like Hesiod, to put the apex of human felicity somewhere in the remote past. But their primitivism is closely linked with nostalgia for a simpler way of life; as such it is essentially unlike Hesiod's idealization of an

[1] The distinction was first drawn in L. Preller's article, "Die Vorstellungen der Alten besonders der Griechen von dem Ursprunge und den ältesten Schicksalen des menschlichen Geschlechts," *Philologus* 7 (1852) 35–60. Of subsequent discussions, the most important is that in Havelock, 25–35.

[2] For the reinterpretation of the life of primitive man in the light of the first chapters of *Genesis* see Uxkull-Gyllenband, 47–48, and G. Boas, *Essays on Primitivism and Related Ideas in the Middle Ages* (Baltimore 1948) 1–67.

[3] Homer's attitude, explicit in sporadic and formulaic references (*Il.* 1.272, 5.304, 12.383, 12.449, 20.287) to feats of strength beyond the capacity of men οἷοι νῦν βροτοί εἰσιν, is implied in the whole epic tradition: four centuries after ceasing to exist, the Achaean world continued to supply the principal subjects of heroic narrative.

age which he believed to have been better, though hardly less complicated and sophisticated, than his own.[4] In similar fashion, proponents of a cyclical view of history might believe, as Homer did, that earlier civilizations were more elaborate and splendid than theirs. But the Atlantis or primeval Athens which they envision is always separated from the present world age by some sort of cataclysm; men are thereby reduced to the level of bare subsistence and must proceed by gradual stages to the modicum of civilization they now enjoy.

Concerning the character of this process and its ultimate worth in terms of human well-being opinions continued, of course, to vary greatly. Civilization could be regarded as an unmixed blessing, an unmitigated evil, or something intermediate between the two. Its creation or recreation was alternately the work of a few favored (or perverse) individuals, or the collective achievement of a whole race; a purposeful progress toward perfection, or a series of somewhat haphazard responses to the promptings of necessity. And the evolutionary perspective went much further with some than it did with others. All could agree that technology, or the bulk of it, was of recent origin. About language there was less unanimity: some maintained that it had come into being in the same fashion as technology; others, however, insisted that it owed its origin to nature alone, not human contrivance. And ethics was still harder to bring within an evolutionary perspective. Society and social norms, so most would have argued, rest on moral feelings which are innate in man from the very beginning; the latter may be subject to refinement or decay but not to essential change.[5]

Such divergences of attitude and approach are significant and will play a prominent role in later portions of our discussion. But it is important at the outset to stress those generic similarities which can be traced through the vast majority of ancient accounts of the origin of culture. For certain purposes it mattered little whether civilization was a monument to divine benevolence, human ingenuity, or the indifferent workings of accident and chance.[6] As to its monumental and remarkable character there was no

[4] In the terminology of the authors who have made the most thorough study of the attitudes involved (Lovejoy and Boas, 1–11), Hesiod's "chronological primitivism" is never found in later antiquity apart from "cultural primitivism." An interesting comment on the change is provided by the text tradition of the *Works and Days*. Line 120: *ἀφνειοὶ μήλοισι φίλοι μακάρεσσι θεοῖσιν* was considered spurious by the Alexandrians, presumably because the domestication of animals which it implies seemed to them to belong properly to a later stage of development. See T. G. Rosenmeyer, "Hesiod and Historiography," *Hermes* 85 (1957) 282–83, who defends the authenticity of the line.

[5] Once more in the terminology of Lovejoy and Boas (14–15), a "technological" (or linguistic) "state of nature" was much easier to envision than an "economic," "marital," or "juristic and ethical" one.

[6] The tragic poet Moschion, in a well known fragment (*TGF* 814.18–22), is either uncertain or indifferent as to the exact character of the civilizing agent: it may have been Promethean intelligence or necessity or nature herself working through *τῇ μακρᾷ τριβῇ*.

disagreement; and in analyzing individual details of the structure one writer might draw freely on the work of another, of basically different tendency, adapting and modifying only when absolutely necessary.[7] Moreover, careless and unoriginal writers (and they comprise the majority of those whose statements on the subjects have survived) were quite capable of combining unrelated or even contradictory motifs within a single narrative.[8]

Such borrowing and conflation would be of little importance for the historian if all the divergent attitudes mentioned above were developed consistently and completely in extant texts. Unfortunately they are not. Often their character must be reconstructed, or their existence inferred, from scattered and fragmentary references, imbedded at times in contexts which are completely alien to them. It is thus almost impossible, in studying any one aspect of ancient thought on cultural origins, to isolate a single text or group of texts as having sole relevance to the problem. Whatever their immediate scope, one's investigations must rest in the last analysis on a survey of the whole range of accounts exhibiting a view of culture which is in any sense evolutionary. Since such a view was almost canonical for a thousand years, and the primitive condition of mankind a popular theme with a variety of writers for an even longer period, the accounts are correspondingly numerous. It will be useful, before proceeding further, to review them briefly.[9]

Two texts stand out for the length and systematic character of their presentation. They occur in the fifth book of Lucretius and the third book of Plato's *Laws*. The former is usually, and perhaps wrongly, regarded as the *locus classicus* for ancient *Kulturgeschichte*. The estimate is certainly one which

[7] Cf. for example the appearance, in both naturalistic and teleological contexts, of arguments drawn from the biological and physiological advantages which distinguish man from other animals (below, pp. 41–42, with note 33).

[8] The passage of Vitruvius discussed below, p. 42, provides a good example.

[9] On what follows cf. Uxkull-Gyllenband, Lovejoy and Boas, Mondolfo, *La comprensione del soggetto umano nell'antichità classica* 629–739; Billeter, "Griechische Anschauungen über die Ursprünge der Kultur," *Beilage zum Programm der Kantonschule Zürich* (1901); and F. C. Seeliger's article "Weltalter" in *Roschers Lexicon*, 6.375–417. Of these comprehensive studies Uxkull-Gyllenband's is probably the best and that of Lovejoy and Boas (who reprint in full all passages discussed) the most useful. More selective and topical in their treatment are Sikes, *The Anthropology of the Greeks*, and Guthrie, *In the Beginning*. Havelock, 52–73 and 104–24, offers the best and most complete discussion of the pertinent fifth century texts; Spoerri, 132–63, the most exhaustive examination of all the material which has a bearing on the interpretation of the *Kulturgeschichte* in Diodorus 1.8; and Thraede, 1192–1241, the most recent and most complete discussion of the *heuretês* theme. O. Apelt, "Die Ansichten der griechischen Philosophen über den Anfang der Kultur," *Jahresbericht über das Carl Friedrichs-Gymnasium zu Eisenach* (1900–01) 5–16; F. Dümmler, "Kulturgeschichtliche Forschung im Altertum," *Verhandlungen der 42. Versammlung deutscher Philologen in Wien* (1893) = *Kleine Schriften* 2 (Leipzig 1901) 443–62; and E. Malcovati, "Le idee degli antichi sull'umanità primitiva," *RendIstLomb*, Ser. 2, 50 (1917) 465–76, confine themselves to a few general-ities. Preller's article (above, note 1) is now of merely historical interest.

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makes too little allowance for the possibility that Lucretius' narrative represents a specifically Epicurean treatment of the subject. But the text is so detailed and comprehensive that it must occupy a prominent, if not necessarily central, place in one's researches. Plato's account (*Laws* 3.676A-83A), longer though less thorough, treats the origin of culture and society as a preface to the political history of the Peloponnesus, Attica, and Persia. Like Lucretius V, it is too much the product of a specific philosophic point of view to be used uncritically and, at the same time, too important to be ignored altogether. It represents the nearest approach, among pre-Hellenistic texts, to a systematic treatment of its subject. It offers, moreover, a combination of technological and social history. The presence of this combination is inferable in many of the portions of ancient *Kulturgeschichte* for which we possess a fragmentary record, but it is only here that its existence and character can be extensively documented.

Cultural history is a subordinate topic both in Lucretius' poem and in Plato's treatise. There existed in antiquity works in which it was the principal or sole topic, and the treatment which it received there must have been more elaborate. No treatises of this sort have survived, but a number of them are known to us by title or through summary references to their contents. The most ambitious may have been the *Life of Greece*, by Aristotle's pupil Dicaearchus of Messene (Fr. 47–66 Wehrli). Besides presenting a history of Greek society, Dicaearchus made an effort to place this history into the larger context of human culture as a whole. His schematization of prehistory according to the dominant form of livelihood—food-gathering, herding, or farming—in each successive stage was probably the most important and influential part of his work. But surviving fragments indicate that the details as well as the general pattern of cultural development received their share of attention.

Writers of universal history could begin, if they wished, with a piece of *Kulturgeschichte* (e.g. Diodorus Siculus 1.8), and so might local historians, if they were dealing with an area whose inhabitants claimed to be autochthonous. The subject appears in several fragments of Philochorus (*FGrH* 328F2, F93–98); the title *Protogonia* (*FGrH*, 323F5a, F7) suggests that it was treated in the *Atthis* of Cleidemus as well; and a passage from Pausanias (8.1.4–6) points to the same conclusion for the local historians of Arcadia. Moreover, to judge from the procedure followed by Diodorus in describing non-Greek lands (e.g. India in 2.38 and Ethiopia in 3.2), prehistory was one of the subjects regularly treated in ethnographical writing.[10] Many of the relevant passages in Diodorus are fairly brief, but the account of early Egypt which appears in 1.10–29 is both extensive and important.

[10] See K. Trüdinger, *Studien zur Geschichte der griechisch-römischen Ethnographie* (Basel 1918) 49–51.

Primarily, though not exclusively, devoted to the technological aspect of culture was a whole body of literature on individual inventors and inventions. The genre enjoyed a long and, to us, somewhat inexplicable popularity. Its beginnings go back to the fifth century;[11] Ephorus (*FGrH* 70T33d; F2–5, F104–6), Heraclides Ponticus (Fr. 152 Wehrli), Theophrastus (D.L. 5.47), and Strato of Lampsacus (Fr. 144–47 Wehrli) are all said to have tried their hand at it; and echoes occur as late as Cassiodorus and Isidore of Seville.[12] The inventions with which it deals are both the elementary ones (fire, clothing, and the like) which made possible man's original survival as a species, and the more advanced ones on which a complex civilization depends. More rarely, the creation of cities and legal or social usages is included (e.g. in Pliny *NH* 7.194, 200). It is usually assumed that heurematistic works took the form of simple catalogues. Conceivably, however, this is true only of the sources, all of them summary and derivative, upon which we must rely for our knowledge of the genre.[13] The originals on which they draw may well have been fuller, perhaps tracing in connected and systematic fashion a succession of stages in the growth of each of the technologies considered.

There were other ancient works devoted exclusively or primarily to the problem of cultural origins, but we know next to nothing about them. Tradition lists a *Περὶ τῆς ἐν ἀρχῇ καταστάσεως* among the works of Protagoras (*VS* 80B8b), and if Plato's testimony is correct, *archaiologiai* were among the subjects of the public discourses of Hippias of Elis (*Hipp. mai.* 285D = *VS* 86A11). This indicates that cultural histories were composed by the Sophists; it does not, however, provide any basis for determining their scope and character. Even more problematical is the role of *Kulturgeschichte* in the writings of the pre-Socratics. Its appearance time and again in the surviving fragments (Xenophanes, *VS* 21B4 and 18; Anaxagoras, *VS* 59B4 and 21; Archelaus, *VS* 60A1 and 4.6; Democritus, *VS* 68A75, 151, B144 and 154) suggests that it was one of their principal interests. But whether this interest ever led to the production of a connected and systematic exposition of the subject we do not know.

Direct or indirect information about works specifically concerned with *Kulturgeschichte* is often less important for our knowledge of the subject than

[11] *FGrH* 8T1 (Simonides the historian). Isolated references to inventions and inventors appear, of course, much earlier. See Kleingünther for a collection and discussion of the relevant passages down to the end of the fifth century and Thraede for a complete survey of the tradition.

[12] References to the subject are scattered through Cassiodorus' *Variae*; see Kremmer, 90–96. In Isidore, see *Orig.* 3.10.1, 16.1, 22.8, 25.1; 4.3.1; 5.1.1–2; 6.10.1.

[13] As Kremmer (91, note 1) suggests. Pliny's account is the longest which survives. Less extensive catalogues are found in Tatian, Clement of Alexandria, Gregory Nazianzenus, and Hyginus. See Kremmer, 7–58 and 64–90.

the incidental references, ranging from a few lines to one or two pages in length, which appear in contexts devoted to other topics. The frequency with which such references occur is remarkable, and the casualness with which they are introduced indicates that the theme was familiar. Cicero finds in admirers of Thucydides' style (*Orator* 31) a perversity comparable to that which would be required to make men continue to feed on acorns once grain was discovered—assuming, evidently, that his readers would not miss the reference to the view of those historians of culture who made acorns man's earliest food, only subsequently abandoned with the advent of agriculture:

> prima Ceres ferro mortalis vertere terram
> instituit, cum iam glandes atque arbuta sacrae
> deficerent silvae et victum Dodona negaret.[14]

Primitive men, with their beds of leaves, their garments of hides, and their diet of berries and grasses, seem to have been a part of the stock in trade of every rhetorician and philosopher; pitiable or enviable, as the writer's own conviction or the course of his argument might require, they could be introduced into a great diversity of contexts in support of varied and often contradictory conclusions.

In epideictic passages it was common to portray the object of one's praise as somehow intimately associated with the laborious process which led from savagery to civilization. The earliest connected pieces of *Kulturgeschichte* which survive are fairly straightforward examples of this technique. It is man himself, the most marvelous of the world's wonders, who is glorified by reference to his technological and political achievements in the first stasimon of the *Antigone*; and Man the Forethinker receives a similar tribute from Aeschylus in the speeches in which Prometheus tells of his services to the race. In other accounts Palamedes (Gorgias, *VS* 82B11a.30), Orpheus (Aristophanes, *Ranae* 1032),[15] Hephaestus (*Hymn. Hom.* 20.1–7), or an unnamed *theos* (Euripides, *Suppl.* 201–15) takes the place of Prometheus.

Primitivists, especially the Cynics, were later to condemn Prometheus for the same "services" (Dio of Prusa 6.25, 29–30). Others kept the epideictic tone but used the *topos* for a narrower purpose. Not man in general or human *promêtheia*, but a particular class of men or a single *technê* was assigned the place of honor in the development of civilization. Though it is reasonable to assume that this device was developed by the Sophists,[16] it is first docu-

[14] Virgil, *Georgics* 1.147–49. Other appearances of the view are too numerous to require documentation. The Pythia's reference to the Arcadians as *balanêphagoi* (Herodotus 1.66.2) is perhaps the earliest.

[15] On Orpheus as *Kulturbringer* see H. Koller, *Die Mimesis in der Antike* (Bern 1954) 189–92.

[16] See F. Heinimann, "Eine vorplatonische Theorie der τέχνη," *MusHelv* 18 (1961) 118–19.

mented in Isocrates. The *Panegyricus* (28–40) and later the *Panathenaicus* (119–48) celebrate Athens as the bringer of technology, culture, and law;[17] and in almost identical passages of the *Nicocles* (5–6) and *Antidosis* (253–54) the same role is assigned to oratory. In his 90th letter Seneca gives a fairly extensive summary (and refutation) of a work in which Posidonius sought to glorify philosophy by making the *sapiens* the moving force in all stages of human progress. Cicero adopts the perspective of Isocrates or Posidonius as occasion demands (cf., for the former, *Inv.* 1.2–3 and *De orat.* 1.35–36; for the latter, *Tusc.* 5.5). Orator and philosopher are replaced by the architect in the passage on the development of culture found in the second book of Vitruvius (2.1.1–7 = 33.14–36.18 Rose). For Horace (*AP* 391–401) it is the art of the *vates* that chiefly contributed to the rise of civilization; for Themistius (349A–51A), Xenophon (*Oec.* 5.17), and Tibullus (2.1.37–66), that of the farmer;[18] for Aelius Aristides (*Or.* 3, pp. 32.23–34.2 Dindorf), sailing and the seafaring way of life; and Ovid, more frivolously, though with better grounds, glorifies his own *ars* by assigning the same role to love (*AA* 2.473–80). In a fragment of the comic poet Athenio preserved in Athenaeus (14.660–61 = Fr. 1 Kock) a cook expounds the view that, because it put an end to the savage diet of raw flesh on which men once fed, his own profession must be considered the principal benefactor of the race. The speech is presumably a parody of the sort of passage which we have just been considering and a striking testimony to the popularity of its theme.[19]

Further variations on this epideictic *topos* were, of course, possible. Aristotle glorified philosophy (*Met.* 1.981B13–82A1) and Manilius astronomy (1.66–112) by describing, not a cultural genesis which they made possible, but a cultural development of which they are the final and culminating phase. Moreover, the phenomenon of the rise of culture might provide grounds for exalting, not a particular craft, but new things in general at the expense of old. So Aristotle points out, as a possible argument for the desirability of constitutional change, the fact that civilization would never

[17] For later references see Dittenberger, *Syll.*[3] No. 704, p. 324.12–15 (an Amphictyonic inscription of the second century B.C. praising the Athenian *dêmos* for raising men from their animal-like existence); Lucretius 6.1–4; Cicero, *Flacc.* 62; Pliny, *Ep.* 8.24.2; Statius, *Theb.* 12.501–2; Aelian, *VH* 3.38; D.L. 5.17.

[18] It has been plausibly argued that Xenophon and Themistius derive their praise of agriculture from Prodicus; see Nestle, *Hermes* 71.153–60.

[19] Though the humor lies less in the claim itself than in the manner in which it is presented: cf. *De vet. med.* 3, where the practice of cooking food is credited with liberating man from the *thêriôdês diaita* of grass and berries from which he once suffered; and Aristotle *EN* 7.1148B22–23, which cites cannibalism and the eating of raw flesh as comparable examples of the depravity of which human nature is capable. For the position of *De vet. med.* in the general context of ancient *Kulturgeschichte* see H. W. Miller, *TAPA* 80.189–98, and "*Techné* and Discovery in *On Ancient Medicine*," *TAPA* 86 (1955) 51–52; and Herter, *Maia* 15.469–83.

have arisen had not change been continuously introduced to better the way of life of the first men, an earth-born and foolish lot (*Pol.* 2.1268B30–69A8).[20] Over six centuries later, Christian apologists were using the same argument to defend the new religion against the old (Arnobius 2.66; Prudentius, *Contra Symm.* 2.272–317).[21]

Further information about ancient theories of cultural origins comes from passages of an aetiological character. The most important are those which seek to establish the basic character of existing political and social institutions by showing how they came into being out of a primitive "state of nature." Once again, the mode of argumentation seems to have been first used by the Sophists. However one wishes to assess Plato's own share in the creation of the *Protagoras* myth, it is reasonable to assume a Sophistic origin for the basic idea which accounts for its inclusion in the dialogue—that an understanding of how justice and reverence first arose among men can tell us something about the way these concepts operate in contemporary society. A very similar point of view, at any rate, appears in an unquestionably Sophistic work, the treatise of the late fifth or early fourth century writer known as the Anonymus Iamblichi (*VS* II 402.24–30);[22] and Sophistic influence has often been suspected in the portion of *Republic* II which, by way of a preface to its discussion of justice, tells how society first came into being through an original division of labor between carpenter, farmer, and cobbler.[23] Plato's later essay in *Kulturgeschichte* (*Laws* III) contains a theory of the familial origin of society and the state which was taken over by Aristotle in the first book of the *Politics* (1.1252A24–B34) and used there and elsewhere (e.g. *Pol.* 1.1259A37–B17; *EN* 8.1160B22–61A9) as an aid in analyzing the different social relationships which existed in the *polis* of his own day; and Polybius composed what is probably the most remarkable of all ancient accounts of social origins in an effort to bring to light forces he believed to be still operative in the rise and fall of political institutions (6.5–9). As might have been expected, the conflict between the idealist ethic of the Stoics and Peripatetics and the utilitarian one of their Epicurean and Sceptic adversaries was accompanied by rival theories of the origin of culture. Traces of these theories are to be found in Epicurus and several of his followers (see below, pp. 71–77), in Horace (*Sat.* 1.3.99–114), and in Cicero, most extensively in Books I (11–14) and II (11–15) of the *De officiis*, which erect a system of practical ethics on the principle, first of *to kalon*, then

[20] The idea is doubtless not original with Aristotle; cf. Isocrates, *Euag.* 7.

[21] Cf. also the *Kulturgeschichte* of Ps.-Lucian, *Am.* 33–35, which is introduced to show that homosexual rather than heterosexual love is to be preferred as being the more recent and less natural.

[22] For the parallels see, most recently, Cole, *HSCP* 65.132–33.

[23] See Dickermann, 88–89; Uxkull-Gyllenband, 19–20; Havelock, 96–97.

of *to sympheron*, and support both doctrines by extensive references to *Kulturgeschichte*.[24]

Linguistic and religious, as well as social, usages came under consideration from the same aetiological perspective. Most surviving accounts of the origin of language appear in conjunction with descriptions of the origin of society or technology, but language is given separate treatment in Epicurus' *Letter to Herodotus* 75–76, as it doubtless was in other works now lost. Two of the most famous ancient explanations of the origin of religion connected it with the conditions of man's primitive existence: Critias' *Sisyphus* fragment (*VS* 88B25) makes the gods a useful expedient devised to cope with the lawlessness in which mankind once lived; and the notion that divine honors were, in origin, the reward conferred on the inventors who raised man out of his primitive helplessness appears in the works of Euhemerus and his precursors and followers.[25] The character of religious observances, as well as their existence, could be explained in terms of *Kulturgeschichte*. Theophrastus, in his work *On Piety*, discussed the evolution of the various forms of sacrifice and explained the absence of animal offerings in certain countries as a survival from the time when man was a vegetarian;[26] and the tragic poet Moschion appeals in similar fashion to the history of culture to explain the custom of burying the dead (Fr. 6, *TGF* 813–14).[27]

The evolutionary view of culture is even found on occasion where one would least expect it. Its appearance in conjunction with Plato's Atlantis myth (*Timaeus* 22B–25D; *Critias* 109B–10D) has already been noted (above, p. 2). A similar combination of motifs characterizes the myth of the *Politicus*, which, like Hesiod, looks back to a more perfect age in the distant past, but, unlike Hesiod, separates this age from the present one by a cataclysm—the departure of the world's divine steersman—which necessitates a laborious acquisition of the arts necessary for survival (274A–D). In similar fashion, Virgil, though describing in the *Georgics* a Hesiodic golden age, concludes his account in a very un-Hesiodic way; not simple degeneration, but Jupiter's decision to end the indolence bred by a superabundance of blessings brings the Golden Age to an end, and the result is a slow and laborious development of the arts of civilization (1.145–46):[28]

labor omnia vincit
improbus et duris urgens in rebus egestas.

[24] For other pieces of Stoic *Kulturgeschichte* in Cicero cf. *Rep.* 1.39–41; *ND* 2.150–52. The anti-Stoic account in Lactantius, *Inst. div.* 6.10.13–15 may also be Ciceronian in origin.

[25] The view may go back to Prodicus. The *testimonia*, contradictory and unclear at times, are collected in *VS* 84B5.

[26] Frs. 2.20–22, 33–36, 43–47 and 13.36–50 Pötscher.

[27] Cf. also Ovid's *aition* for the nudity of the Luperci (*Fasti* 2.289–302).

[28] For the background of this idea see "Hésiode et son influence," *Entretiens Hardt* 7 (1960) 258–63, and L. P. Wilkinson, "Virgil's Theodicy," *CQ* 57 (1963) 77–78. *FGrH* 134F17, p. 728.23–30 (Onesicritus' conversation with the gymnosophists) gives what is perhaps its earliest appearance.

Elsewhere (*Aen.* 8.314–23), following a tradition known to Macrobius (*Sat.* 1.7.21) and possibly Varro, Virgil makes Saturn the bringer of the blessings of civilization to a rude race which did not know them before.[29] Here the method chosen is somewhat different from that of the *Georgics*, but it achieves a similar compromise between the Hesiodic and the later view of prehistory.

So widespread was this later view that it affected even the explicators of Hesiod. The last surviving sample of ancient *Kulturgeschichte* is in the scholia to the *Works and Days* written in the eleventh century by the Byzantine scholar Johannes Tzetzes (reprinted in part in *VS* II 137.36–138.13). Tzetzes attempts—and the attempt was doubtless not original with him (see below, pp. 148–51)—to make Hesiod's account intellectually respectable by allegorizing it. The freedom from labor in the fields which Hesiod had described becomes a grim necessity: the result, not of a superabundance of spontaneous nourishment, but of an ignorance of the techniques of farming. The men of the Golden Race were happy because, though quite wretched by later standards, they knew of nothing better and so did not notice their misery. Old age and death were unknown only because men were too simple as yet to know what death was, hence did not dread it, and because, in an age without doctors or medicine, no one ever lived to old age.

The above survey could doubtless have been made more comprehensive, but it has touched upon almost all the major passages and types of passage in which cultural history appears. Brief as many of these texts are, they are sufficiently numerous to provide both an abundance and an embarrassment of materials for the historian of ancient thought. For certain portions, at any rate, of his researches there is no lack of documentation; at the same time he may well despair of discerning any pattern in what is a heterogeneous and at times bewildering array of ideas and observations. And an examination of the work of his predecessors may only serve to confirm him in his diffidence and scepticism.

During the past century many of the texts mentioned above have been the object of repeated efforts in *Quellenforschung*. The result is a number of studies which seek to group large bodies of material around a single great name. Posidonius and Epicurus figured most prominently in earlier attempts of this sort;[30] they were natural choices given the commanding place which Lucretius V occupies among surviving accounts and the vogue enjoyed for several decades by "Panposidonianism." Little attention was paid to the

[29] See A. Schmeckel, *De Ovidiana Pythagoreae doctrinae adumbratione* (Diss. Greifswald 1885) 27–29; and, for the story in Christian writers, G. Boas, *Primitivism in the Middle Ages* (Baltimore 1948) 195–97.

[30] Extreme examples are Norden's article in *NJbb* Suppl. 19.411–25 (Epicurus) and Gerhäusser's *Der Protreptikos des Poseidonios* 16–30.

role which pre-Hellenistic thinkers might have played in shaping the tradition, until the publication, in 1912, of Karl Reinhardt's article, "Hekataios von Abdera und Demokrit" (*Hermes* 47.492–513). Reinhardt attributed the prehistory found in Diodorus 1.8 to Hecataeus of Abdera and, through him, to Democritus. This thesis was accepted by Diels in the fifth edition of his *Vorsokratiker* and has strongly influenced all subsequent investigation.[31] Reinhardt himself believed (512) that Democritus' treatment of the subject was authoritative for all of antiquity; most of his followers have been less bold,[32] but they are inclined to see at least partial or indirect Democritean influence in almost all later phases of the tradition. Epicurus, Posidonius, even Plato and Aristotle, are assumed to be heavily in his debt.

Neither Reinhardt's work nor that of his forerunners and followers is rigorous and thorough enough in its reconstructions to carry much conviction. Too often single motifs, which a wider survey of source material would have shown to be quite commonplace, have been regarded as the specific and identifying property of a single thinker;[33] or minor similarities of detail have been invoked to establish a close connection between authors whose basic conceptions of the evolution of culture are quite different;[34] or an author's known or presumed philosophic affinities have been taken as a satisfactory indication of what source he must necessarily have followed.[35]

This frequent misapplication of source criticism provides some grounds for scepticism about the validity of the whole method. Hence the tendency, evident in several recent treatments of the subject, to eschew *Quellenforschung* altogether in favor of a largely descriptive presentation.[36] Here emphasis is placed on the generic similarities which link a great variety of texts, and the tradition as we know it is treated as if it were a body of widely held ideas, mostly of unidentifiable origin. Within this body of material, to be sure, certain basic divergences of attitude may be discerned, but their outlines are

[31] See the literature cited by Spoerri, 4–5.

[32] So, for example, J. Kaerst, *Geschichte des Hellenismus* 2[2] (Berlin 1926) 373.

[33] So Dyroff, *Zur Quellenfrage bei Lukrez* 11–12, adduces the mention of acorns as man's earliest food as evidence for the Peripatetic origin of the doctrines of Lucretius V; and R. Philippson, "Ciceroniana I. De Inventione," *NJbb* 133 (1886) 417–19, assumes that Cicero, *Inv.* 1.2–3 and *De Orat.* 1.35–36 must be Posidonian because they stress the role of the gifted individual in the cultural process. Against Philippson see H. M. Hubbell, *The Influence of Isocrates on Cicero, Dionysius and Aristides* (Diss. Yale 1913) 29–30.

[34] For the application of this method to Vitruvius see Appendix II.

[35] This is probably the principal reason for the often repeated attempt to find a Stoic source for the *Kulturgeschichte* of Polybius. On the search, and its generally unsatisfactory results, see von Fritz, *The Theory of the Mixed Constitution in Antiquity* 55–58 and Walbank, 643–45.

[36] E.g. in the accounts of Havelock, Guthrie, Mondolfo, Spoerri, and Thraede (cited above, note 9). Except for the studies of Vlastos (*AJP* 67.51–59) and K. Westphalen, *Die Kulturentstehungslehre des Lukrez* (unpubl. diss. Munich 1957, known to me only through the references in Spoerri's *addenda*, 213–21), no piece of *Quellenforschung* in this field has appeared in recent years.

so vague and fragmentary as to be hardly worth studying. This approach doubtless has something to recommend it and has been adopted in the introductory survey just completed. The points of contact between so many accounts, ranging over a millenium and a half in their dates of composition, show quite clearly that we are dealing with what must have been, to some degree, the common property of all educated men. One may well wonder, however, whether this is all that is involved. For there is nothing in principle against the assumption which guided earlier *Quellenforschung*: that portions of surviving accounts of cultural origins are a condensed and fragmentary report of doctrines once developed more elaborately in the works of a single thinker. The evolutionary view of culture with which we are concerned may, conceivably, be comparable to certain contract theories of the origin of society whose popularity in the seventeenth and eighteenth centuries cannot be traced to the influence of any one writer. On the other hand, it is just as possible that a better analogy is provided by the views widely current today on the subjects of biological evolution and psychoanalysis, views in which it is possible to recognize, simplified and distorted as they often are, doctrines which go back to Darwin and Freud.

Even if the second analogy is more nearly accurate, it need not follow that, on the basis of the texts which now survive, we can learn anything definite about the ultimate sources of our tradition. But this fact does not constitute a sufficient reason for abandoning altogether the attempt to do so, if the attempt is carried out with more regard than was shown in certain earlier investigations for the complexity of the material under consideration and with, perhaps, a slightly different focus. One should be concerned less with specific details of treatment than with basic attitudes and whole modes of presentation: the divergent approaches whose existence within the tradition has already been indicated (above, p. 2). And one's efforts should not be directed, at least not at the outset, toward identifying a specific source. It is more important to note which parts of the tradition seem, by virtue of closely shared attitudes and modes of treatment, to belong together, and to complete, whenever such juxtapositions allow it, the doctrines which single texts merely hint at or preserve in fragmentary form. Certain details of treatment will seem commonplace as long as they are assigned the lowest common denominator of significance which would allow for their inclusion in any discussion of cultural origins; they may well appear in a different light when viewed along with related material against the background of the particular school of thought to which they belong. In so far as the method outlined succeeds in detecting, in parts of the tradition as it now stands, traces of a more consistent and elaborate theory of cultural history, it will naturally point to the existence of a common source. Whether it succeeds in

identifying this source is of less importance; to have recovered a more sophisticated version of ancient *Kulturgeschichte* than exists in surviving texts will be in itself a service to the history of ancient thought.

One cannot promise that the results achieved by this method will be spectacular, but unless its possibilities are at least put to the test there is a fair chance that the real achievements of the Greeks in the realm of anthropological speculation are being unnecessarily ignored or obscured.[37] Hence the present study, the first eight chapters of which are an exercise in *Quellenforschung* along the lines just suggested.

Our starting point will be a group of texts, four Hellenistic and one Byzantine, which seem to present a single doctrine and to provide a basis for its partial reconstruction. All are heavily technological in their emphasis, although, as will become apparent in later stages of the investigation, they seem to derive from a tradition whose perspective was much broader. Stress will be placed throughout on the set of related ideas which these texts contain, rather than on the establishing of doxographical *stemmata*; and if these ideas come to be designated eventually as Democritean, the identification is intended as a supplementary and in some sense subordinate conclusion, not as a basic premise on which the whole investigation must stand or fall. The works chosen for detailed examination represent only one of the approaches to their subject current in antiquity, but the evidence which they present is unique in two ways. Nowhere else, to my knowledge, can similarities so close and so extensive be found; it is here, then, if anywhere, that a comparative study has a chance to remove some of the gaps and uncertainties which mar large portions of the tradition. And the line of thought which these five texts represent is that which seems to have gone furthest in its effort to view all aspects of civilization—technological, linguistic, social—from an evolutionary standpoint. We shall therefore be examining what was probably the most detailed and ambitious, as well as the most nearly recoverable, of all ancient theories of the origin of culture.

[37] Cf. Gigon in *Gnomon* 33.776 (in criticism of Spoerri's tendency to find only "allgemeine Bildungsgut" in surviving accounts): " . . . das Ziel sinnvoller Forschung ist doch die Wüste solcher Allgemeinheiten zurückzudrängen zugunsten der gestalteten und gestaltenden Individualitäten."

CHAPTER ONE

COMMON MOTIFS IN FIVE ANCIENT HISTORIES OF TECHNOLOGY

Although extensive generic resemblances can be traced within the body of ancient texts relating to cultural origins, few accounts contain passages so closely similar as to make their dependence on a single source immediately obvious. Such passages do, however, exist; and we shall begin our inquiry with two of the most striking. The first is taken from Diodorus' history of early Egypt; the second is an excerpt from the *Kulturgeschichte* which appears in the second book of Vitruvius.

Diodorus 1.13.3	Vitruvius 33.16–23*
γενομένου γὰρ ἐν τοῖς ὄρεσι κεραυνοβόλου δένδρου καὶ τῆς πλησίον ὕλης καομένης,	quodam in loco ab tempestatibus et ventis densae crebritatibus arbores agitatae et inter se terentes ramos ignem excitaverunt; et eo flamma vehementi perterriti, qui circum eum locum fuerunt sunt fugati.
προσελθόντα τὸν Ἥφαιστον	postea re quieta propius accedentes,
κατὰ τὴν χειμέριον ὥραν ἡσθῆναι διαφερόντως ἐπὶ τῇ θερμασίᾳ·	cum animadvertissent commoditatem esse magnam corporibus ad ignis teporem,
λήγοντος δὲ τοῦ πυρὸς ἀεὶ τῆς ὕλης ἐπιβάλλειν	ligna adicientes
καὶ τούτῳ τῷ τρόπῳ διατηροῦντα τὸ πῦρ	et ita conservantes
προκαλεῖσθαι τοὺς ἄλλους ἀνθρώπους	alios adducebant
πρὸς τὴν ἐξ αὐτοῦ γινομένην εὐχρηστίαν.	et nutu monstrantes ostendebant quas haberent ex eo utilitates.

Vitruvius wrote after Diodorus, hence could have known and reproduced his work.[1] But such differences as there are between the two passages do not suggest borrowing of this sort. Diodorus places the discovery of fire in Egypt and attributes it to a certain Hephaestus, who through his achievement wins first kingship and then divine honors. Vitruvius, on the other hand, does not localize the episode, does not speak of a single discoverer, and mentions no

* Vitruvius page and line references are to Rose's edition, Leipzig 1867.

[1] Diodorus' failure to mention the Roman conquest of Egypt seems to establish 30 B.C. as a *terminus ante quem* for his work. His own visit to Egypt took place between 60 and 56 B.C. (1.44.1), and a chronological reference in the passage where the visit is mentioned suggests that his account of the country dates from about the same time (see Oldfather's edition, Vol. 1, pp. viii–xi). Vitruvius' reference to Augustus (5.1.7) shows that the completion of his work must be placed after 27 B.C.

political or religious consequences. Of the two treatments, Vitruvius' has every appearance of being the original one. Neither the climate nor the landscape which Diodorus describes is Egyptian (as Reinhardt points out, 499), and the discovery, which, as it is presented in both Diodorus and Vitruvius, stems more from accident and external suggestion than from one man's exceptional intuition, is hardly sufficient reason for the conferring of kingship and godhood. Only one explanation satisfactorily accounts for the relationship in which the two passages stand: both writers are reproducing a common source, Vitruvius with some accuracy, Diodorus with such modifications as are necessary to adjust it to an Egyptian setting.

Further parallels between the portions of Diodorus and Vitruvius from which these passages are drawn confirm this interpretation. In two pairs of passages almost as closely related as the two just considered, both writers discuss the origin of language (Diod. 1.8.3, Vitr. 33.24–28) and the qualities of mind and body to which man owes his technological achievements (Diod. 1.8.9, Vitr. 34.2–6 and 36.1–5).[2] But there is now one significant difference. Diodorus' accounts no longer come from his description of early Egypt (1.10–29) but from an earlier portion of the book (1.8), which gives a brief general account of the origin of human culture. There they have the same setting as do their counterparts in Vitruvius. One might infer that Diodorus and Vitruvius are drawing on the same source for all three sets of passages, and that Diodorus has simply transferred one of them to an Egyptian context, in which it is somewhat out of place. Actually the relationship between the two writers and their common source seems to have been more complicated. It is probable that what now appears as 1.8 was, in Diodorus' immediate source, connected somehow with the passage on the discovery of fire as part of a specifically Egyptian *Kulturgeschichte*. From this context it was detached by Diodorus and transferred to his general introduction. The *Kulturgeschichte* was itself, however, the result of the "Egyptianization" of an earlier general account—the same one from which, ultimately, Vitruvius derives. This rather elaborate reconstruction, first proposed by Reinhardt (495–99), has recently been questioned.[3] Reinhardt's critics are wrong, I think, but the arguments pro and con need not concern us here (for a defense of Reinhardt's position, see Appendix I). It is sufficient for our present purposes to point out that the alternation of Egyptian and non-Egyptian settings in the portions of Diodorus which have close parallels in Vitruvius supports our original contention that Vitruvius is not dependent on Diodorus. Both authors derive eventually from a single source, a source

[2] See below, pp. 33 and 40.

[3] Notably by Pfligersdorfer, *SBWien* 232, No. 5, 143–44 and Spoerri, 114–16, 129 and 163–64. See also Jacoby, *FGrH* IIIa 39.26–37; 85.30–86.3.

upon which both the *Kulturgeschichte* of 1.8 and its Egyptian complement in 1.13–29 must, at least in part, depend.

There are two other ancient accounts of cultural origins which, though linked by parallels less striking than those just examined, still show clear evidence of derivation from a common source. These appear in the fifth book of Lucretius and Seneca's 90th letter. The individual passages to which *Quellenforschung* has most often called attention are the following:[4]

LUCRETIUS 5.1241–57	SENECA, *Ep.* 90.12
aes atque aurum ferrumque repertumst	in hoc . . . dissentio [from Posidonius] sapientes
. . . . .	fuisse qui ferri metalla et aeris invenerint,
ignis ubi ingentis silvas ardore cremarat	cum incendio silvarum adusta tellus
. . . . .	
flammeus ardor	
horribili sonitu silvas exederat altis	
ab radicibus et terram percoxerat igni,	
manabat venis ferventibus in loca terrae	in summo venas iacentes liquefactas fudisset.
concava conveniens argenti rivus et auri	
aeris item et plumbi.	

Although Lucretius and Seneca are the only two ancient writers to describe the discovery of mining in this fashion, the passages are too brief to exclude altogether the possibility that they are simply reproducing a widely prevalent account, other specimens of which do not happen to have survived.[5] This possibility must, however, be rejected in view of further parallels between the contexts in which our two passages occur. Lucretius and Seneca deal with the first metal tools in close conjunction with their accounts of the discovery of mining (Lucr. 5.1262–68, Sen. *Ep.* 90.11) and proceed to describe, in the same order, two subsequent technological developments made possible by these metal tools: weaving (Lucr. 5.1350–53, Sen. *Ep.* 90.20) and farming (Lucr. 5.1361–66, Sen. *Ep.* 90.21). What Lucretius and Seneca share is not simply an account of the discovery of mining, but an

[4] Cf. Uxkull-Gyllenband, 34, note 44; Gerhäusser, *Der Protreptikos des Poseidonios* 27–28; Reinhardt, *Poseidonios* 403, note 1. The resemblance was first noted by Knaacke, *Hermes* 16.593, note 2.

[5] It is only particular elements of the account which can be paralleled elsewhere in ancient literature. The liquefying of a vein of metal—though not, as here, as an explanation of the original discovery of mining—appears in Posidonius *ap.* Strabo 3.147 and Athenaeus 6.233D–E; Ps.-Aristotle *Ausc. Mirab.* 87, 837A24–26 and Diodorus 5.35.3–4. These texts are given in full in K. Müllenhoff, *Deutsche Altertumskunde* 2 (Berlin 1890) 312–13. The spontaneous forest fire, without any further effects, is found in Manilius 1.856–57; *Aetna* 363–65; Lucretius 1.897–900; and as early as Thucydides (2.77.4). Strabo and Diodorus derive directly from Posidonius, though not from the work used by Seneca. According to Strabo, Posidonius himself introduced his account as a well-known *mythos*. Müllenhoff (*op. cit.*, this note, 1.339–42) suggests that Ps.-Aristotle derives from Timaeus of Tauromenium.

account of metallurgy, its discovery and its effect on the subsequent development of culture. And the identity of detail and arrangement in the two accounts is not likely to be accidental.

Lucretius and Seneca are drawing ultimately on a common source. Seneca's immediate source was, of course, Posidonius: the entire 90th letter is an attack on the latter's contention that *sapientes* played a significant part in the development of technology, and the passages from the letter which we have cited are simply summaries of Posidonius' views, here reproduced by Seneca in order to refute them. It has been suggested on occasion that Posidonius was Lucretius' source also.[6] But the suggestion seems rather unlikely. The *sapientes* who play so prominent a role in Posidonius' account of prehistory are completely missing from Lucretius,[7] and the discrepancy is best explained by assuming that they are a specifically Posidonian modification introduced into a tradition which Lucretius preserves in purer form. Their role is, in fact, somewhat incongruous, comparable in this respect to that of Hephaestus in Diodorus' description of the discovery of fire. Like Diodorus and Vitruvius, Lucretius and Posidonius emphasize the role which chance and external suggestion play in the development of technology; and

[6] E.g. by Gerhäusser, *Der Protreptikos des Poseidonios* 27–28; Rudberg, *Forschungen zu Poseidonios* 80, note 1; Diels, *SBBerlin* 1921, 237–44.

[7] The contrary has been maintained, largely on the basis of 5.1105–11 (cf. Ernout-Robin *ad loc.*) and of Lachmann's emendation *benigni* for *et igni* in 1106:

> inque dies magis hi victum vitamque priorem
> commutare novis monstrabant rebus *et igni*
> *ingenio* qui praestabant et corde vigebant.
> condere coeperunt urbes arcemque locare
> praesidium *reges* ipsi sibi perfugiumque
> et pecus atque agros divisere atque dedere
> pro facie cuiusque et viribus *ingenio*que.

The talented individuals of 1107 are (as Spoerri notes, 146, note 16) a motif in Epicurean *Kulturgeschichte* as early as Hermarchus (see below, pp. 71–72), hence provide only a generic similarity to the *sapientes* of Posidonius. If, on the other hand, the *reges* of 1109 are identified with the *benigni* of 1106, the parallel with Posidonius becomes exact. The identification, however, is unlikely for several reasons. Lachmann's emendation is almost certainly wrong: the cities which the kings founded are not the work of benevolence—they are built for self-protection (Bailey *ad loc.*, calling attention to *praesidium ipsi sibi perfugiumque* in 1109); and the parallels between 1105–7 and both Diodorus and Tzetzes (see below, pp. 22 and 36) support the *mss.* reading. Moreover, it is not at all certain that we should even identify the *reges* of 1109 with the inventors of 1107 (cf. Merrill *ad loc.*; Borle, *MusHelv* 19.167). The connection may simply be that inventors supply the technology needed for building cities, or that they are the recipients of *agros* and *pecus* (compare *ingenio* in 1107 and 1111). And if we do grant the correctness of the identification, the linking of early kings and early inventors is still not exclusively Posidonian (cf. Aristotle, *Pol.* 3.1285b6–9; Megasthenes *FGrH* 715F12, p. 617.2–13; Euhemerus, *FGrH* 63F24). The existence of these parallels and the presence of a number of purely traditional or specifically Epicurean elements in other portions of Lucretius' account of early kingship (see below, Chap. VI, note 18) make the theory of a Posidonian origin for 5.1105–11 quite unnecessary.

the *sapientes* no less than the benefactor-god Hephaestus are out of place in such a process. They are the chosen agents through which philosophy leads the race to an ever higher destiny, yet they go about their work in a most matter-of-fact, almost haphazard way. Their inventions cause Posidonius to marvel at the resources of the philosophic mind,[8] yet are, as Seneca points out (*Ep.* 90.21, 25, 33), of the sort which continue to be produced by people who are not philosophers at all. Posidonius provides, in fact, an excellent example of the sort of *contaminatio* mentioned in our introduction. That the extensive interpenetration of naturalist and teleological motifs which characterizes his work should disappear completely in a lengthy account derived from his is inconceivable.[9] The parallel passages in Lucretius, in all of which a consistently naturalist perspective is to be observed, must be taken as evidence for use of a common source.[10]

The conclusions reached thus far with regard to the relationship linking Vitruvius to Diodorus and Lucretius to Posidonius in the specific passages examined are neither new nor, so far as I can see, should they be controversial. The evidence speaks for itself. Certain investigators, however, have sought to go further and posit a single source for all four writers.[11] Their contention is poorly supported, since it rests largely on the untenable assumption that all evolutionary accounts of culture must go back to some one authority; but it is also, I believe, correct. Two pieces of evidence, neglected hitherto, may serve to put the hypothesis of a single source on somewhat firmer ground. Lucretius' account of mining and metallurgy is more complete than Seneca's. It begins with what is a prerequisite for both

[8] Cf., in Seneca's account, *quomodo convenit ut et Diogenen mireris et Daedalum* (90.14); *facunde describit* (90.21); and the admiring detail with which the workings of the loom are described (90.20). The bounty of nature as well as the power of human *logos* may have been treated with the same characteristic *enthousiasmos*. Cf. the account of the liquefying of a vein of metal recorded in Strabo 3.147.

[9] For the combination, within a single Posidonian passage, of naturalism and teleology, see 90.22–23, the discovery of the milling of grain and its baking into bread. Here art patterns itself on nature in two ways: the automatic action of the teeth in chewing food suggests to man the use of a millstone to serve the same purpose, and the cooking of the grain by fire imitates the cooking which goes on within the stomach. Obviously, the two types of imitation are quite different. The first is a simple learning from experience and example and can be paralleled throughout the *Kulturgeschichte* of Lucretius V. The second involves the Aristotelian—and teleological—idea of *technê* as something which *τὰ μὲν ἐπιτελεῖ ἃ ἡ φύσις ἀδυνατεῖ ἀπεργάσασθαι, τὰ δὲ μιμεῖται* (*Phys.* 2.199A15–17). Cf. *Meteor.* 4.381B6–7: *μιμεῖται γὰρ ἡ τέχνη τὴν φύσιν ἐπεὶ καὶ ἡ τροφῆς ἐν τῷ σώματι πέψις ὁμοία ἐψήσει ἐστίν*. On the Posidonian conception of a "teleological" imitation of nature see, in general, K. Reinhardt, "Poseidonios," *RE* 43 (1953) 808; and, for the difference between this and "naturalist" imitation, Theiler, 100, with note 1.

[10] In addition to the passages considered in the text, the military excursus of 5.1308–49 has been thought to show Posidonian influence (Diels, *SBBerlin* 1921, 243–44); but against this view see Reitzenstein, *Orient und Antike* 2.65–70.

[11] See, in particular, Reinhardt, *Poseidonios* 392–408 and Uxkull-Gyllenband, 33–34 and 44–46.

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developments, the discovery of fire (5.1092–1101); and it places warfare (1283–86), as well as weaving and farming, among the arts whose development was furthered or made possible by metal tools. Diodorus, as we have seen, describes the discovery of fire; and just as that account seemed to be an Egyptian version of the parallel account in Vitruvius, so the sequel to it in his work reads like an Egyptian version of Lucretius. Hephaestus discovers fire and so inaugurates a dynasty—the first technocracy. He is succeeded by Cronus, then by Zeus, and finally by Osiris, under whose patronage mining and the working of gold and copper are discovered and the new technology applied, first to the manufacture of weapons, then to agriculture (1.15).[12] The only item in Lucretius which does not have its parallel here is weaving, and there is reason to believe that it, too, appeared in the work on which Diodorus drew for this part of his Aegyptiaca. The Egyptian theology which is attributed to the priest Leo in an apocryphal letter of Alexander the Great to his mother resembles these chapters of Diodorus so closely that it must be closely related to their source (see below, pp. 153–54), and it ascribes the discovery of weaving to Osiris' contemporary Hermes.[13]

To this argument for the existence of a single source for Lucretius and Diodorus and hence for all four of our texts, another may be added. Tzetzes' commentary on Hesiod (see above, p. 10) stands in close, though somewhat problematical relationship to Diodorus. It is clear that Tzetzes has read the first book of Diodorus—the Egyptian portions as well as the general material in Chapter 8—for he gives a partial paraphrase of both sections in his *Iliad* scholia (55.28–57.25 Hermann).[14] For his explication of Hesiod's myth of the Golden Age, Tzetzes also borrows certain phraseology from Diodorus (see below, pp. 27–29), but these borrowings appear in a larger context which seems itself to be related to Diodorus, though in a more indirect way. The character of the relationship is well illustrated by Tzetzes' allegorical interpretation of the Prometheus story (74.14–20 Gaisford).

[12] Diodorus offers an alternate genealogy, according to which not Hephaestus but Helios was the founder of the dynasty (1.13.2). Since Hephaestus here equals Ptah and Helios equals Amon-Ra, the variation reflects ultimately a conflation of different native traditions. If Diodorus himself was responsible for the conflation, and if Osiris' patronage of the useful arts belonged originally with the Helios tradition, the parallel drawn in the text between his account and those of Lucretius and Posidonius is not valid. The first supposition may be correct; the second almost certainly is not. Hephaestus as founder of the dynasty and Osiris as patron of the arts are already linked in the closely parallel account of Leo mentioned in the text (see *FGrH* 659F5, F9).

[13] See Hyginus, *Astron.* 2.20 and Tertullian, *De Pallio* 3. These and other remnants of Leo's theology are printed in *FGrH* 659 as fragments of the historian Leo of Pella. But the latter's existence has been inferred, probably erroneously, from a single passage in Arnobius. See Pfister, *Festschrift Klauser*, 296–97. The name of the real author of Alexander's letter to Olympias is not known.

[14] On Tzetzes' borrowing from Diodorus in general see Spoerri, *MusHelv* 14.187–88, and the further literature cited there, 185, note 13.

οἱ προμηθέστεροι δὲ τῶν ἀνθρώπων, χειμῶνος γεγονότος, καὶ κεραυνωθέντος δένδρου τινός, ὡς πλησιάσαντες ἐκεῖσε τῆς θέρμης αἴσθησιν ἔσχον, μηχανῶνται φυλάξαι τὸ πῦρ καὶ δὴ σομφοῖς τισι ξύλοις καὶ νάρθηξι δυναμένοις τοῦτο φυλάξαι κατέκρυψαν, καὶ οὐράνιον πῦρ ὑπάρχον τὸ πρὶν οὕτω κατασχεθὲν . . . ἐμυθεύθη κλαπῆναι . . .

The κεραυνωθέντος δένδρου which is the source of the fire recalls Diodorus' κεραυνοβόλου δένδρου (1.13.3), but the rest of the passage is closer to Vitruvius, both in content and in phraseology. The discoverers are plural and anonymous, not, as in Diodorus, a named divinity; πλησιάσαντες recalls Vitruvius' *propius accedentes* (33.19) rather than Diodorus' προσελθόντα; and τῆς θέρμης αἴσθησιν ἔσχον is nearer to *animadvertissent commoditatem . . . ad ignis teporem* than to ἡσθῆναι διαφερόντως ἐπὶ τῇ θερμασίῃ. One is tempted to assume that behind this portion of Tzetzes' account there lies, ultimately, the source from which both Diodorus and Vitruvius derive.[15]

Tzetzes' explanation of the Pandora myth (79.4–21 Gaisford) suggests the same conclusion. Prometheus (human forethought, perverse ingenuity) gives men fire; the inevitable result of this—allegorically, the result which Zeus (destiny) brings to pass—is the arrival of Pandora (technology) and that Pandora's box of evils, civilization. The gifts which Pandora receives and the gods who bestow them are the several prerequisites which man needs in order to produce technology: τὰ ὑλικὰ καὶ ὀργανικά from Hephaestus, τὸ κατασκευαστικὸν καὶ ἀγχίνουν from Athena, and energy and wiliness from Hermes, who is *logos*. The list partially parallels Diodorus' own enumeration (1.8.9; see below, p. 40) of the qualities to which man owes his technological achievements: ψυχῆς ἀγχίνοια, λόγος, and χεῖρες (which would certainly be among τὰ ὀργανικά if not τὰ ὑλικά in the development of the arts and crafts). Tzetzes' account of Pandora's gifts is too closely connected with his whole allegory to allow the supposition that he has here borrowed a set of details directly from Diodorus; once again the hypothesis of a common source provides the most plausible explanation.

That this source was closely connected with the one used by Lucretius is suggested by verbal parallels between Tzetzes' Hesiod commentary and Book V of the *De rerum natura*:

Tzetzes	Lucretius
[The earliest men] ἀγελαῖον διέζων τὸν βίον δίκην ποιμνίων. (*Schol. in Hes.* 68.6–7 = *VS* 68B5, p. 137.39–40)	[The earliest men] volgivago vitam tractabant more ferarum. (5.932)
[The consequences of Prometheus' theft of fire are to be interpreted as]	[A bolt of lightning or branches rubbing together in the wind produced fire; thereafter]

[15] Even the phrase κεραυνωθέντος δένδρου, it should be noted, need not reflect the influence of Diodorus. The interpretation of the myth demanded that fire be *ouranion* rather than, as in Vitruvius' account, the result of the friction of branches.

τὸ μετατραπῆναι ὑπὸ τῆς προβουλίας ταύτης ἐκείνην τὴν προτέραν τοῦ βίου διαγωγὴν ὑπὸ τῆς εὑρέσεως τοῦ πυρός, ὃ καὶ τοῖς εὐροῦσι καὶ μεταγενεστέροις γέγονε βλάβη. (81.24–27)	inque dies magis hi victum vitamque priorem commutare novis monstrabant rebus et igni ingenio qui praestabant et corde vigebant. (5.1105–7)
ἐπεὶ δὲ προμηθέστεροι γεγονότες καὶ προβουλευτικώτεροι τὸ πῦρ ἐφεῦρον	inde casas postquam ac pellis ignemque pararunt,
καὶ θερμοτέρων . . . πραγμάτων ὠρέχθησαν καὶ τὴν τοῦ . . . βίου ἐκείνου μετέστρεψαν διαγωγὴν . . . καὶ ἐκ . . . πυρὸς αἱ τέχναι προσεφευρέθησαν	et mulier coniuncta viro concessit in unum . . . . . . tum genus humanum primum mollescere coepit. ignis enim curavit ut alsia corpora frigus non ita iam possent caeli sub tegmine ferre,
δι' ὧν τὰ ἡδέα καὶ τερπνὰ καὶ ἁβρότατα γίνεται, δίκην γυναικὸς ἡμᾶς καταθέλγοντα καὶ τρυφερωτέρους ἀπεργαζόμενα, ὃ καλεῖ πλάσιν γυναικὸς ὁ ποιητής. (68.24–69.4 = *VS* 68B5, p. 138.8–13)	et Venus imminuit viris puerique parentum blanditiis facile ingenium fregere superbum. (5.1011–18)

The parallels in the last pair of passages reproduced are not so complete as in the other two. Lucretius speaks of an actual softening of disposition brought about by love and family life; in Tzetzes the softening comes from technology and its comforts, and is only compared to the effects of a woman's charms. Yet the divergence is explicable if we assume that Tzetzes is modifying an anthropological account similar to that found in Lucretius so that it will fit his Pandora = technology equation; and *ignis . . . curavit ut corpora frigus . . . non ita iam possent . . . ferre* provides an excellent gloss for the otherwise rather mysterious phrase θερμοτέρων πραγμάτων ὠρέχθησαν.

Tzetzes' account, no less than the parallels in choice and arrangement of material between Lucretius and Diodorus, provides grounds for believing that Vitruvius, Diodorus, Lucretius, and Posidonius are dependent, in part at least, on a common source; and if this hypothesis is correct, Tzetzes himself is a fifth author dependent on the same source.[16] The points of contact between our five texts can be summarized as follows:

[16] This view is in sharp contrast with that of Spoerri (*MusHelv* 14.183–88) who argues that Tzetzes' commentary merely combines material taken directly from Diodorus with an idealized view of the state of nature as a Golden Age. There are certainly elements of the latter view in Tzetzes—elements to which there is no parallel in Diodorus. Moreover, as has been indicated above (p. 20) Tzetzes certainly knew and used Diodorus. Three considerations, however, seem to me to tell heavily against Spoerri's contention. (1) Tzetzes' account need not be a combination of "zwei entgegengesetzte Auffassungen" (Spoerri, 184); it can just as easily be regarded as a consistent, or nearly consistent, exposition of what has been called "hard primitivism" (Lovejoy and Boas, 10). Because life in the state of nature is recognized as poor, brutish, and short, it does not follow that it is solitary or nasty. The simple life breeds peace and harmony; its privations develop in man a corresponding toughness which makes him insensible to them; and living always at the level of bare subsistence saves him from the tyranny of superfluous desires. Although Tzetzes fluctuates occasionally in his references to the state of nature, his basic conception of its advantages and disadvantages is clear and consistent (see 116.13–16: primitive men are free from μισαλληλία, κακοπραγμοσύνη, φθόνος, but more subject than their descendants to ψύχος, καύσων, ἐπίθεσις τῶν θηρίων). (2) Tzetzes'

SUBJECT	PARALLEL TREATMENTS				
	DIODORUS	VITRUVIUS	TZETZES	LUCRETIUS	POSIDONIUS
1. Discovery of fire.	*	*	*		
2. Metallurgy and its applications.	*			*	*
3. Summary of qualities which enable men to develop technology.	*	*	*		
4. Life of early man; revolutionary effect of discovery of fire.			*	*	

The existence of a single source is not guaranteed. There is no one item which appears in all five texts; hence it is conceivable that the four items come ultimately from different accounts which were subsequently combined in different ways by our five authors. Still, the hypothesis of a common source is worth consideration and, if possible, further testing. Such a source, if it existed, may have been a sort of Hellenistic *koinê* on the subject of cultural origins—a collection of isolated observations or summary bits of doctrine linked loosely by their common assumption of an original animal-like existence, followed by a gradual development of the arts.[17] On the other hand, it may have been something more ambitious, a continuous and unified

whole account, both in its form and in its content, so closely parallels surviving descriptions of the *kynikos bios* (see below, pp. 149–51) that it is hard to believe that the bulk of it was not taken over directly from a Cynic source. (3) Spoerri's suggestion does not explain the close parallels between those parts of Tzetzes not connected with Diodorus and other texts which Diodorus resembles quite closely (see above, pp. 20–22, and below, pp. 29–30). That Tzetzes should make additions on his own is natural enough; that they should closely coincide with those other texts in a number of points is rather unusual. The *Kulturgeschichte* of Tzetzes must have come into being in much the same way as the zoogony which precedes it in his commentary (67.16–68.1 = *VS* 68B5, p. 137.26–35). K. Reinhardt has shown, in *Kosmos und Sympathie* (Munich 1926) 395–97, that the earlier passage combines direct borrowings from Diodorus 1.7 with material from a separate tradition, portions of which survive in the *Hermippus* of Johannes Catrarius (reprinted in *VS* 68B5, pp. 136.31–137.23). The conclusion follows from the fact that, though there are close verbal parallels linking Catrarius with Tzetzes and Diodorus with Tzetzes, no such parallels link Catrarius with Diodorus. But Catrarius and Diodorus, though not so closely connected to each other as either is to Tzetzes, are nevertheless related texts; this is clear from similarities both in the content and in the organization of their accounts. Doubtless a similar relationship existed between the tradition to which Diodorus belongs and the main, Cynic, source used by Tzetzes. And it must have been the wide range of agreement between Diodorus and this source which suggested to Tzetzes the idea of expanding the latter in one or two places with material drawn from the former.

[17] Cf. Spoerri's view (163) of Diodorus 1.8: "einen Bericht . . . der dem allgemeinen Bildungsgut seiner Zeit entsprach." The positions of Havelock and Gigon with regard to the sources of this account are essentially similar, though they would place the origin of most of the material at an earlier date: "an epitomized amalgam of pre-Socratic speculation" (Havelock, 408); the work of an author who "griechische oder barbarische Anschauungen der Frühzeit vorsokratisch drapierte, dabei Lehren mehrerer Vorsokratiker, Banales und weniger Banales, zusammenfügte." (Gigon, *Gnomon* 33.775).

exposition in accordance with certain fundamental premises and methods. If it was the latter, or anything approaching it, one ought to be able to detect behind our texts as they now stand the basic lines of treatment adopted in their source. I believe that such lines of treatment are discernible and shall attempt to trace them in the chapter which follows. The discussion will seek to resolve, as nearly as possible, the source problem raised by our texts and, more important, to make a first step toward recovering the lost stages of the speculative tradition which they represent.

CHAPTER TWO

A PATTERN OF PREHISTORY

The *Kulturgeschichte* which emerges from the five texts considered in Chapter One may be divided for clarity of presentation into a number of different stages. These stages, along with an indication of the authors in which each one is represented, are given in outline form on page 26. The account which they embody is continuous from the beginnings of the human race to the beginnings of recorded history.[1] It starts with a description of the earliest condition of man, a technological state of nature characterized by the absence of four prime necessities: fire, shelter, clothing (1C) and a steady food supply (1D), whether obtained by farming or food-gathering. His first steps toward civilization take the form of an attempt to satisfy these needs, first in a rudimentary, then in a more complicated way: cave-living and food-gathering (Stage 2) are followed by the discovery of fire, houses, garments of skins and cultivated grains (Stage 3). Occurring at about the same time as the discovery of fire are the beginnings of society and language (4A, B). Both developments are necessary for the more elaborate technologies described in Stage 5: fire makes possible the tools through which advances in technology take place; and, though man as an individual may possess the hands and ingenuity (6) required for the creation of the useful arts, it is only the pooling of a number of talents which makes possible a rapid and varied development of technology (4C; 5F). The fine arts come at a later stage (7), once the pressure to create needed inventions has eased somewhat and man can turn to pursuits which minister to pleasure as well as utility. Finally, since the tradition with which we are dealing is a speculative one, its reconstruction of human progress concludes with the invention of the alphabet and written records (8A); what happens thereafter is the concern of the historian or the antiquary, not of the speculative anthropologist.

[1] The continuity of the account must be seen in Lucretius and, more imperfectly, Vitruvius. Seneca's record of Posidonius is fragmentary, and in Tzetzes and Diodorus there has been extensive rearrangement and *contaminatio* (see above, Chap. I, note 16; below, pp. 187–92). Several scholars (Lachmann *ad* Lucr. 5.1091–1100; Jelenko, *WS* 54.59–69; Merlan, *Journal of the History of Ideas* 11.364–68) find evidence for *contaminatio* or separate recensions in Lucretius V as well; but against their analyses see Barwick, *Philologus* 95.193–211, and Borle, *MusHelv* 19.162–76. Reinhardt's attempt (*Poseidonios* 404–406) to decompose Vitruvius 34.6–36.18 into two separate strata is discussed in Appendix II.

TABLE 1

Stages in the Development of Culture			Occurrence in Texts				
			Vitr.	Diod.	Tze.	Lucr.	Pos.
1.	A	The earliest men: nomadic		*	*	*	
	B	and dependent on food gathering for their subsistence;		*	*	*	
	C	fire, clothing, and shelter are unknown,		*	*	*	
	D	as well as the art of storing food; starvation is frequent.		*	*	*	
2.	A	Initial provisions made for shelter		*	*	*	*
	B	and for the gathering and storing of food.		*	*		
3.	A	Discovery of houses,	*			*	*
	B	clothing,				*	
	C	fire,	*	*	*	*	
	D	and grain and its method of preparation.		*		*	
4.	A	Formation of the first societies	*	*		*	
	B	and the first languages;	*	*		*	
	C	competition and emulation stimulate the growth of the useful arts.	*	*		*	
5.	A	Further development of technology made possible by fire:		*	*	*	
	B	mining and metallurgy, producing tools which are used in the development or improvement of		*		*	*
	C	warfare,		*		*	
	D	weaving,				*	*
	E	and agriculture;		*		*	*
	F	cumulative character of the process.	*			*	
6.		Summary of factors in the growth of the useful arts: accumulated experience and man's natural endowments: hands, speech, intelligence.	*	*	*	*	
7.	A	The non-essential arts, among them	*				
	B	astronomy,		*		*	
	C	and music.		*		*	*
8.	A	Conclusion: the stage of civilization described in our earliest written documents;		*		*	
	B	their late origin accounts for the speculative character of all reconstructions of prehistory.		*		*	

Such, in barest outline, is the view of prehistory which lies behind all five of our texts. For a more detailed presentation and documentation we must consider the successive stages of our table individually and in conjunction with the passages in which they appear.[2]

[2] In what follows sections and sub-sections are titled, numbered, and lettered as in Table 1; and wherever possible Diodorus, Tzetzes, Lucretius, Vitruvius, and Seneca are cited by reference to the letter and number of the particular subsection in which the passage in question will be found reproduced.

For convenience, Tzetzes citations will be identified by the page and line number of *VS*, Vol. II,

1. *The earliest men:* (A) *nomadic, and* (B) *dependent on food-gathering for their subsistence;* (C) *they lack fire, clothing, and shelter,* (D) *as well as the art of storing food; starvation is frequent.*

Diodorus	Tzetzes	Lucretius
(A) τοὺς δὲ ἐξ ἀρχῆς γεννηθέντας τῶν ἀνθρώπων φασὶν ἐν ἀτάκτῳ καὶ θηριώδει βίῳ καθεστῶτας σποράδην ἐπὶ τὰς νομὰς ἐξιέναι,	(A) οἱ τότε δὲ τῶν ἀνθρώπων . . . ἀγελαῖον διέζων τὸν βίον δίκην ποιμνίων ἐπὶ νομὰς ἐξιόντες	(A) volgivago vitam tractabant more ferarum. (5.932)
(B) καὶ προσφέρεσθαι τῆς τε βοτάνης τὴν προσηνεστάτην καὶ τοὺς αὐτομάτους ἀπὸ τῶν δένδρων καρπούς. (1.8.1)	(B) καὶ τοῖς ἀκροδρύοις κοινῶς καὶ τοῖς λαχάνοις τρεφόμενοι.	(B) quod sol atque imbres dederant, quod terra crearit / sponte sua, satis id placabat pectora donum. (5.937–38)
(C) τοὺς οὖν πρώτους τῶν ἀνθρώπων μηδένος τῶν πρὸς βίον χρησίμων εὑρημένου ἐπιπόνως διάγειν, γυμνοὺς μὲν ἐσθῆτος ὄντας, οἰκήσεως τε καὶ πυρὸς ἀήθεις τροφῆς τε ἡμέρου παντέλως ἀνεννοήτους.	(C) γυμνοὶ δὲ οὕτω τυγχάνοντες καὶ σκέπης καὶ χρημάτων ὄντες ἐπιδεεῖς,	(C) necdum res igni scibant tractare neque uti / pellibus et spoliis corpus vestire ferarum. (5.953–54)
(D) καὶ γὰρ τὴν συγκομιδὴν τῆς ἀγρίας τροφῆς ἀγνοοῦντας μηδεμίαν τῶν καρπῶν εἰς τὰς ἐνδείας ποιεῖσθαι παράθεσιν. διὸ καὶ πολλοὺς αὐτῶν ἀπόλλυσθαι κατὰ τοὺς χειμῶνας διά τε τὸ ψῦχος καὶ τὴν σπάνιν τῆς τροφῆς. (1.8.5–6)	(D) καὶ μηδὲ καρποὺς καὶ ἀκρόδρυα πρὸς ἀποθήκας συναγαγεῖν εἰδότες, ἀλλὰ μόνην ἐσθίοντες τροφὴν τὴν ἐφήμερον χειμῶνος γεγονότος πολλοὶ διεφθείροντο. (137.36–44)	D) penuria deinde cibi languentia leto / membra dabat. (5.1007–8)

The parallels here are quite close. Of the basic lacks which are listed under items C and D, Diodorus mentions all four; Tzetzes, though only naming three, presupposes the fourth: fire's original absence is implied by his mention of its discovery at a later stage in his account (3C). Lucretius does not refer to an initial ignorance of how to store food, although, like Diodorus and Tzetzes, he notes that primitive man often died of starvation. The reason for the omission is perhaps to be found in an earlier passage of Book V, which explains that the earliest men lived at a time when the spontaneous products of the earth were more abundant than they are now (5.942–44):

> plurima [arbuta] tum tellus etiam maiora ferebat.
> multaque praeterea novitas tum florida mundi
> pabula dura tulit, miseris mortalibus ampla.

This contradicts what is said later about *penuria cibi*, nor is it the only place where Lucretius exhibits traces of a primitivism completely absent from

under Fr. 68B5: i.e. "137.36–40" means *VS* 68B5, p.137.36–40. "Posidonius" will mean Posidonius *ap.* Seneca, *Ep.* 90, and section numbers of that letter will be used to identify Posidonius passages.

Diodorus and rather out of keeping even with the general tenor of his own account, although it can be paralleled in Tzetzes (see above, Chap. I, note 16).[3] It is doubtless the presence of this strain in his work which makes him dwell less than do the other two authors on the initial scarcity of food.

The close verbal parallels between Diodorus and Tzetzes may be the result of direct borrowing (see above, pp. 20–22, with note 16); hence it could be argued that this part, at any rate, of Tzetzes' account does not provide independent evidence for the existence of a common source. But the parallels (noted above, pp. 21–22) between Tzetzes and Lucretius in item 1A[4] suggest that here, as elsewhere, Tzetzes is conflating material taken directly from Diodorus with an account which goes back ultimately to the same source as both Diodorus and Lucretius.[5]

[3] See the parallels with Tzetzes noted by Norden, *NJbb* Suppl. 19.415–16. Other details in Lucretius' account recall the idealized picture of primitive man which appears in the *Politicus* of Plato, in Dio of Prusa, and in Maximus of Tyre (see Spoerri, 153–54; Grilli, *RendIstLomb* 86.37–38; Theiler, 81). In the present passage, however, there may be more than mere "primitivism" involved; see below, Chap. X, note 71.

[4] Though phrased somewhat differently, the three descriptions of primitive life reproduced under 1A are substantially identical. *Volgivagus* in Lucretius 5.932 is usually taken as equivalent to *vagus*, but the closest parallel formation, *solivagus* (Cicero, *Tusc.* 5.38; *Rep.* 1.39; Pliny, *NH* 8.23) suggests that it should mean wandering in groups—i.e. as in Tzetzes, *agelaion*. The only other occurrence of the word is in 4.1071: *volgivaga Venus* (=*Aphroditê pandêmos*), and this usage supports our interpretation. *Pandêmos* itself suggests a herd existence (cf. Sophocles, *Ajax* 175: *πανδάμους ἐπὶ βοῦς ἀγελαίας*) and "street-walking" Venus does not pursue her calling in a solitary waste. Like her, primitive men are "wanderers among the throng"—*volgivagi* in relation to one another and to the horde which they compose, mingling and separating in random and promiscuous fashion (cf., in Diodorus [1A]: *ἀτάκτῳ καὶ θηριώδει βίῳ*), without the established family and contractual relationships that arise later (4A). *Volgivago more ferarum* is thus a close equivalent for *ἀγελαῖον . . . δίκην ποιμνίων*, although, for Tzetzes, the absence of order which characterizes the initial herd means not confusion but perfect and spontaneous *philallêlia*. Diodorus' expression *sporadên* might suggest that he saw primitive man as *solivagus* rather than *agelaios* (cf. Aristotle, *HA* 9.617B21 and *Pol.* 1.1256A23, where the two terms are contrasted). But solitary life could not be *ataktos*, and men evidently live close enough to one another to give aid in time of danger (4A). *Sporadên* as used here must be intended to contrast the situation of 1A with that which exists later—when *systêmata* based on a common language and mutual assistance have arisen (cf. *HA* 1.488A2–10, where *agelaia* are divided into *sporadika* and *politika*, the latter comprising men, cranes, bees, and all creatures whose herds are linked together by a common *ergon*). Tzetzes, Diodorus, and Lucretius are all describing the same sort of situation (on which see below, pp. 83–87), one whose "solitary" and "social" aspects figure separately in the terms *sporadên* and *agelaion* and are united in the unusual compound *volgivagus*.

[5] The same may be indicated by Tzetzes' use of the phrase *skepês . . . epideeis* (1C; contrast *oikêseôs . . . aêtheis* at the corresponding point in Diodorus). The former suggests a perspective that is largely physical: man is so constituted biologically that he must have shelter (*skepê*) against the elements in order to survive. The latter refers to a lack, not simply of shelter, but of a fixed abode (*oikêsis*) and, perhaps, of the attitudes and ways (*êthê*) that go with it (cf. *aêtheis*). The preoccupation with physical and biological considerations suggested by Tzetzes' phraseology is not found to anything like the same degree in Diodorus; and it is, on the other hand, very much in evidence throughout the accounts of both Lucretius and Tzetzes (see below, pp. 78–79 and 170–72).

It should be noted that Stage 1 appears in only three of our five texts. The reasons for its absence from Seneca and Vitruvius will be indicated later (below, p. 35).

2. (A) *Initial provisions made for shelter and* (B) *the gathering and storing of food.*

Diodorus	Tzetzes	Lucretius	Posidonius
(A) ἐκ δὲ τούτου κατ' ὀλίγον ὑπὸ τῆς πείρας διδασκομένους εἴς τε τὰ σπήλαια καταφεύγειν ἐν τῷ χειμῶνι	(A) λοιπὸν κατὰ μικρὸν τὴν ἀνάγκην σχόντες διδάσκαλον, τὰ κοῖλα τῶν δένδρων καὶ τὰ δασέα καὶ τὰς σχισμὰς τῶν πετρῶν καὶ τὰ σπήλαια ὑπεδύοντο.	(A) denique nota vagis silvestria templa tenebant . . . nemora atque cavos montis silvasque colebant et frutices inter condebant squalida membra, verbera ventorum vitare imbrisque coacti. (5.948–57)	(A) [Men first lived] sparsos et cavis casis tectos aut aliqua rupe suffossa aut exesae arboris trunco. (90.7)
(B) καὶ τῶν καρπῶν τοὺς δυναμένους φυλάττεσθαι ἀποτίθεσθαι. (1.8.7)	(B) καὶ τοὺς καρπῶν δυναμένους φυλάττεσθαι μόλις γνωρίσαντες καὶ ἅπαξ αὐτοὺς συναγείραντες ἐν τοῖς σπηλαίοις ἐναπετίθεντο καὶ τούτοις ἐτρέφοντο δι' ὅλου ἐνιαυτοῦ. (138.1–4)		

The separation between Stage 2 and Stage 1 is not so clear in Lucretius as it is in Diodorus and Tzetzes. But the *denique nota* of 948 and the *coacti* of 957 at least imply that here, as in Diodorus and Tzetzes, the *silvestria templa* are places in which man must learn, or be forced, to take shelter. The three texts are thus rather sharply set off from most other ancient accounts of the life of early men, which often mention cave-dwelling but do not ordinarily view it as in itself a technological achievement whose discovery is worthy of attention.[6]

Vitruvius falls into line with the main body of ancient theory in this respect; he simply says that the first men *vetere more ut ferae in silvis et speluncis et nemoribus nascebantur* (33.14–15), and his remarks on man's earliest diet are equally general. Like Lucretius, he does not discuss the origin of the art of food gathering, contenting himself with the remark that the first men *cibo agresti vescendo vitam exigebant* (33.15–16). There is nothing here to suggest that Vitruvius is drawing from the same source as the texts reproduced above under Stage 2. It is only later portions of his narrative which make this conclusion necessary.

All mention of diet is omitted in Seneca's summary of Posidonius, and the

[6] Cf. *Hymn. Hom.* 20.4; Aeschylus, *PV* 453; Moschion, Fr. 6.5–6 (*TGF* 813); Diodorus 5.39.5.

reference given there to early modes of shelter is as brief as Vitruvius'. Men are said to have lived originally *sparsos et cavis casis tectos aut aliqua rupe suffossa aut exesae arboris trunco* (90.7). Note, however, that *cavis casis, rupe suffossa*, and *exesae arboris trunco* correspond exactly to the *σπήλαια, σχισμὰς τῶν πετρῶν* and *κοῖλα τῶν δένδρων* mentioned by Tzetzes. Here, perhaps, the resemblance is close enough to be more than coincidental.

3. (A) *Invention of houses*, (B) *clothing*, (C) *fire, and* (D) *grain and its method of preparation.*

VITRUVIUS	POSIDONIUS	LUCRETIUS
(A) [In the initial human aggregation] coeperunt . . . alii de fronde facere tecta, alii speluncas fodere sub montibus, nonnulli hirundinum nidos . . . imitantes de luto et virgulis facere loca quae subirent. (34.6–9)	(A) [Philosophy taught the men who were initially] casis cavis tectos aut aliqua rupe suffossa aut exesae arboris trunco tecta moliri. (90.7)	(A) inde casas postquam
		(B) ac pellis
	DIODORUS	
(C) quodam in loco ab tempestatibus et ventis densae crebritatibus arbores agitatae et inter se ramos terentes ignem excitaverunt. . . . qui circum eum locum fuerunt. . . propius accedentes . . . ligna adicientes et ita conservantes [ignem] alios adducebant. (33.16–23)	(C) *γενομένου γὰρ ἐν τοῖς ὄρεσι κεραυνοβόλου δένδρου καὶ τῆς πλησίον ὕλης καομένης, προσελθόντα τὸν Ἥφαιστον . . . ἠσθῆναι· . . . λήγοντος δὲ τοῦ πυρὸς ἀεὶ τῆς ὕλης ἐπιβάλλειν καὶ τούτῳ τῷ τρόπῳ διατηροῦντα τὸ πῦρ προκαλεῖσθαι τοὺς ἄλλους.* (1.13.3)	(C) ignemque pararunt . . . . (5.1011) fulmen detulit in terram mortalibus ignem. . . . et ramosa tamen cum ventis pulsa vacillans / aestuat in ramos incumbens arboris arbor, / exprimitur validis extritus viribus ignis, / et micat interdum flammai fervidus ardor / mutua dum inter se rami stirpesque teruntur, / quorum utrumque dedisse potest mortalibus ignem.
	(D) *πρῶτον μὲν γὰρ παῦσαι τῆς ἀλληλοφαγίας τὸ τῶν ἀνθρώπων γένος, εὑρούσης μὲν Ἴσιδος τόν τε τοῦ πυροῦ καὶ τῆς κριθῆς καρπόν, . . . τοῦ δὲ Ὀσίριδος ἐπινοησαμένου καὶ τὴν τούτων κατεργασίαν τῶν καρπῶν, ἡδέως μεταθέσθαι πάντας τὴν τροφὴν διά τε τὴν ἡδονὴν τῆς φύσεως τῶν εὑρεθέντων καὶ διὰ τὸ φαίνεσθαι συμφέρον ὑπάρχειν ἀπέχεσθαι τῆς κατ' ἀλλήλων ὠμότητος.* (1.14.1)	(D) inde cibum coquere ac flammae mollire vapore / sol docuit, quoniam mitescere multa videbant / verberibus radiorum atque aestu victa per agros. (5.1092–1104)

This stage brings with it fire, clothing, a more satisfactory form of shelter, and the discovery and preparation of grain. No one of these items is present in more than three texts, and only Lucretius contains all four of them (inasmuch as grain, though not explicitly mentioned in his account, is probably the food whose cooking is referred to in 5.1102).[7] Since, however, they represent exactly the necessities of life whose absence was noted in Stage 1, an account of their discovery was to be expected. And the assumption of a common source is the one which best explains the partial similarities between our texts at this point.[8]

[7] The food involved grows soft when exposed to fire (*flammae mollire vapore*), hence cannot be meat (cf. 6.966–69: "ignis . . . coria et carnem trahit et conducit in unum. umor aquae . . . coria et carnem mollit *durata calore*"); and boiling rather than, as here, roasting would be the normal way of preparing vegetables. Cf. also the cooking of grain described by Posidonius (Sen. *Ep.* 90.22–23, discussed above, Chap. I, note 9) and, from unknown heurematistic sources, Pliny, *NH* 7.191: "Ceres frumenta [invenit], eadem molere et conficere"; and Cassiodorus, *Variae* 6.18.6: "Ceres frumenta dicitur invenisse, Pan autem primum consparsas fruges coxisse perhibetur." (On the relation of such sources to the tradition followed by our five texts, see below, Chap. III, note 7.)

[8] Two additional passages from Seneca should be mentioned here, though their derivation from Posidonius is not certain enough to permit their inclusion in the text. The first is 90.18: "tecta tegimentaque et fomenta corporum et cibi quae nunc ingens negotium facta sunt obvia erant et gratuita et levi opera parabilia." The passage seems to be directed against someone who had maintained that *fomenta corporum* were not easily *parabilia*—i.e. one of the benefactions philosophy had conferred on the race (cf. also 90.17). The second, more problematical, passage (or, rather, set of passages) has close parallels in Vitruvius (noted by Rudberg, *Forschungen zu Poseidonios* 58, and Blankert, *Seneca ep.* 90, p. 127):

> [In primitive times] furcae utrimque suspensae fulciebant casam. fronde in proclive disposita decursus imbribus quamvis magnis erat. (Sen. *Ep.* 90.10)
>
> [The first builders] virgeam cratem texuerunt manu et vili obliverunt luto; deinde de stipula aliisque silvestribus operuere fastigium et pluviis per devexa labentibus hiemem transiere securi. (Sen. *Ep.* 90.17)
>
> primumque furcis erectis et virgultis interpositis luto parietes texuerunt. . . . vitandoque imbres et aestus tegebant harundinibus et fronde. postea, quoniam per hibernas tempestates tecta non poterant imbres sustinere fastigia facientes luto inducto proclinatis tectis stillicidia deducebant. (Vitr. 34.14–20)

The resemblances are quite close, but there is a possibility that Seneca is not here drawing on Posidonius. The architectural developments he describes are not presented as the work of *sapientes*; rather, they are achievements of which anyone would have been capable and show that primitive man was perfectly well protected against the elements before the intrusion of the unnecessary refinements in building with which Posidonius credits the *sapientes*. It is possible, of course, that Seneca is using a Posidonian description of early housing for his own purposes. In 90.17 the *deinde* which precedes the reference to *fastigia* suggests that Seneca is abridging an account which, like Vitruvius', separated this stage clearly from a preceding one and regarded the construction of sloping roofs as a device resorted to when flat ones became inadequate. And this would mean that Seneca's source was concerned, like Posidonius, with the gradual development of the arts—not, as Seneca himself is, with the joys of an "architectural" state of nature. Posidonian origin is thus possible, though not certain. It is quite conceivable, for example, that Seneca is here using Vitruvius directly.

Lucretius' account of the discovery of fire (3C), though not linked to those of Diodorus and Vitruvius by verbal parallels, is not essentially different from theirs. And it offers as alternative explanations for the original fire the two which appear separately in Diodorus and Vitruvius: a thunderstorm and the rubbing together of branches.

Two things distinguish the discoveries of Stage 3 from those of the preceding one. Stage 2 may be said to represent the most elementary, or "trial and error", phase in the development of techniques for survival. The caves, thickets, and hollow trees mentioned by Tzetzes and Posidonius were presumably places upon which men stumbled by chance as they wandered in search of food, or in which they were forced to take refuge as they fled from the wild beasts or the elements (cf. *coacti* in Lucretius 2A and τὴν ἀνάγκην σχόντες διδάσκαλον in the corresponding passage from Tzetzes). A long process of trial and error (cf., in 2B, Tzetzes' μόλις γνωρίσαντες and Diodorus' κατ' ὀλίγον ὑπὸ τῆς πείρας διδασκομένους) taught them which fruits were capable of preservation. For these achievements memory is really the only mental faculty required. Neither its application nor the results of its application serve to differentiate man's life greatly from that of the animals.[9]

With Stage 3, however, the mental activity becomes more complicated. In the fire episode man ceases to be a mere user of what nature provides. His initial reactions are simply those of curiosity and pleasure at the warmth which he experiences; eventually, however, he must get the idea of adding fuel to sustain the blaze and use his hands to do so. Nature has provided the opportunity, but man must have the *promêtheia* to take the constructive steps necessary to see that the opportunity does not slip by. Actual recreation of a natural phenomenon rather than, as here, its mere preservation, accounts for the development of houses (3A). In producing the latter, men either reproduce what they have observed, as when they dig new caves; or else, as in their imitation of the nests of birds, derive suggestions from nature, which they then use in creating something which is analogous to, though not an exact copy of, what has been observed.

The second difference between Stages 2 and 3 is that the development is now conceived within a social medium. Stage 4, though it has, for the sake of clarity, been separated from the preceding one in our table, describes events which occur at the same time as, and are in fact interwoven with, those of Stage 3.

4. (A) *Formation of the first societies;* (B) *the origin of language;* (C) *effects of competition and emulation on the growth of the useful arts.*

[9] Cf. Vitruvius' phrase (33.14) *vetere more ut ferae.*

VITRUVIUS	DIODORUS	LUCRETIUS
(A) ergo cum propter ignis inventionem conventus initio apud homines et concilium et convictus esset natus et in unum locum plures convenirent. . . . (33.28–34.2)	(A) καὶ πολεμουμένους μὲν ὑπὸ τῶν θηρίων ἀλλήλοις βοηθεῖν ὑπὸ τοῦ συμφέροντος διδασκομένους. ἀθροιζομένους δὲ διὰ τὸν φόβον ἐπιγινωσκειν ἐκ τοῦ κατὰ μικρὸν τοὺς ἀλλήλων τύπους. (1.8.2)	(A) [Once fire and the comforts of family life had effected a softening of man's nature]
	θεῖναι δέ φασι καὶ νόμους τὴν Ἴσιν, καθ' οὓς ἀλλήλοις διδόναι τοὺς ἀνθρώπους τὸ δίκαιον καὶ . . . ῥᾳστως παύσασθαι διὰ τὸν ἀπὸ τιμωρίας φόβον. (1.14.3)	tunc et amicitiem coeperunt iungere aventes / finitimi inter se nec laedere nec violari. (5.1019–20)
(B) in eo hominum congressu cum profundebantur aliter[10] e spiritu voces quotidiana consuetudine vocabula ut obtigerant constituerunt.[11] deinde significando res saepius in usu ex eventu fari fortuito coeperunt, et ita sermones inter se procreaverunt. (33.24–28)	(B) τῆς φωνῆς δ' ἀσήμου καὶ συγκεχυμένης οὔσης, ἐκ τοῦ κατ' ὀλίγον διαρθροῦν τὰς λέξεις, καὶ πρὸς ἀλλήλους τιθέντας σύμβολα περὶ ἑκάστου τῶν ὑποκειμένων γνώριμον σφίσιν αὐτοῖς ποιῆσαι τὴν περὶ ἁπάντων ἑρμηνείαν. (1.8.3)	(B) at varios linguae sonitus natura subegit / mittere, et utilitas expressit nomina rerum. (5.1028–29)[12]
(C) observantes aliena tecta et adicientes suis cogitationibus res novas efficiebant in dies meliora genera casarum . . . quotidie inventionibus gloriantes alius alii ostendebant aedificiorum effectus et ita exercentes ingenia certationibus in dies melioribus iudiciis efficiebantur. (34.12–14)	(C) προτιμᾶσθαι δὲ παρὰ τῷ Ὀσίριδι . . . τοὺς τὰς τέχνας ἀνευρίσκοντας ἢ μεθοδεύοντας τι τῶν χρησίμων· διόπερ . . . τὴν γῆν ἐργαζομένους φιλοτίμως ἐξημερῶσαι τὴν χώραν. (1.15.4–5)	(C) inque dies magis hi victum vitamque priorem / commutare novis monstrabant rebus et igni / ingenio qui praestabant et corde vigebant. / condere coeperunt urbes . . . / . . . reges . . . / et pecus atque agros divisere atque dedere / pro facie cuiusque et viribus ingenioque. (5.1105–12)

[10] So the *mss.*, though *aliter* in the sense required ("in different ways") is scarcely attested (see C. A. R. Sanborn, "An Emendation of Vitruvius," *HSCP* 20 [1909] 167–68). Of proposed emendations (see Spoerri, 141, note 131) Krohn's *aliter atque aliter* is probably the most satisfactory. I suspect, however, that Vitruvius wrote *illiteratae*, which makes better sense with *e spiritu*. *Illiteratae voces* (standing for ἀγράμματοι ψόφοι which Vitruvius would have found in his Greek original—cf. Aristotle, *De intr.* 2.16A29) are those which cannot be transcribed, i.e. inarticulate. They are mere explosions of breath (hence *e spiritu*) which have not been subjected to the articulating action of the tongue (cf. *diarthroun* in the passage of Diodorus which corresponds to the following stage in Vitruvius' account and, in Cicero, *ND* 2.149, *lingua . . . vocem immoderate profusam fingit et terminat*). *Illiteratae* appears in the grammarians to describe interjections or animal cries (Priscian, *Inst.* 1.1–2 and 15.41; Boethius, *Herm. pr.* 1.2, p. 50.11 Meiser; *Herm. sec.* 1.2, p. 60.25). Though attested only in late authors, the word could well have appeared at an earlier date in a passage translated directly from the Greek. If this emendation is correct, Vitruvius' *illiteratae voces profundebantur* exactly parallels φωνῆς ἀσήμου καὶ συγκεχυμένης οὔσης in Diodorus.

[11] With *vocabula ut obtigerant constituerunt* compare, in the sentence which immediately follows in Diodorus, ὡς ἔτυχε συνταξάντων τὰς λέξεις (1.8.4).

[12] Lucretius' account of the origin of language is basically different from those which appear in Diodorus and Vitruvius (see below, pp. 61–62). It is included, however, at a corresponding point in his narrative of the origin of culture—hence may be legitimately listed as a parallel passage.

Our texts give different reasons for the initial formation of society and place it at slightly different points in their narratives. For Diodorus, social aggregations arise to provide protection against the wild animals, and the chronological relationship between this event and the technological developments which he describes is not made clear.[13] Vitruvius makes the nucleus of the first society the observers and users of the first fire. In Lucretius, fire, clothing, and family life produce a softening of man's disposition which makes him more inclined toward friendship with his fellows (5.1011–18). Such differences are not as significant as they might at first seem. It will be shown later that the views of Diodorus and Vitruvius on the origin of society are not, perhaps, incompatible (below, pp. 65–66). Moreover, though the theory put forward by Lucretius is not peculiar to his school (cf. the parallel passage in Tzetzes cited above (pp. 21–22), it is closely connected with other features in his presentation which do seem to be typically, if not exclusively, Epicurean. The prominent position it occupies may, therefore, be the result of Epicurean modifications introduced into a source whose main argument is followed more faithfully by Diodorus and Vitruvius (see below, pp. 78–79). Even at the present point in our discussion it should be clear that the differences between our three accounts are less important than their common tendency to connect the technological developments of Stage 3 with the social ones of Stage 4. Hephaestus and the anonymous inventors of 3C assemble their fellows to observe their discovery; architecture advances through imitation and emulation among a number of builders (4C); and Osiris, in the Egyptian counterpart to this episode, establishes rewards for inventors.[14] Since emulation in bringing more territory under cultivation results from Osiris' policy, it is natural to assume that some of these rewards took the form of grants of land;[15] and this is confirmed by the parallel in Lucretius 5.1111. *Ingenium* (along with *facies* and *vires*) receives *agros* as its reward in primitive society—presumably the same *ingenium* that is daily

[13] The entire arrangement of Diodorus 1.8 is peculiar, the result, probably, of the original inclusion of the material which now appears there in an Aegyptiaca. See Appendix I, pp. 187–92.

[14] Seneca, *Ep.* 90.40, which is sometimes adduced in this connection (Spoerri, 141, note 30; Blankert, *Seneca ep.* 90, pp. 76 and 95) characterizes the golden age as a period when *quicquid natura protulerat, id non minus invenisse quam inventum alteri monstrasse voluptas erat.* The passage is not based on Posidonius, and the parallel with Vitruvius is not, at any rate, very close. The latter's account makes *inventa* the products of human devising rather than undiscovered aspects of nature's bounty; and intense competition rather than communistic sharing characterizes their coming into being (contrast *inter concordes dividebatur* in 90.40 with *ingenia exercentes certationibus* in Vitruvius). Closer to Vitruvius are Petronius 88.2: *priscis . . . temporibus cum . . . summum . . . certamen inter homines erat ne quid profuturum saeculis diu lateret,* and Manilius 1.83–84: *quodcumque sagax temptando repperit usus / in commune bonum commentum . . . dederunt*—though the motivation they envision is still a basically disinterested one.

[15] In the closely related account of Leo (see below, pp. 38–39) Osiris bestows an *ager* on the discoverer of wool (*FGrH* 659F9a).

transforming man's way of life through fire and the *novae res* that come with it.

That the growth of technology should be placed in a social context at this point is not arbitrary: the developments described are such as are not likely to occur so long as man lives in an isolated or unorganized condition. Fire requires constant tendance, hence cannot exist without at least a rudimentary division of labor. Houses and garments and the use of grain could arise in isolation, but since their devising requires some luck or ingenuity everyone is not likely to hit upon them on his own. They will become prevalent only when the inventor's idea can be easily imitated or reported in speech, and when improvements can take place through the pooling of a number of talents. In Posidonius these first inventors appear as a special class of philosophers who guide mankind in its progress toward civilization. The orientation of his account, which does not seek to give a general history of the race but merely to tell of philosophy's services to it, probably explains his omission of Stage 1. Philosophers are not needed to account for the transition from that stage to the following one; hence the transition and what precedes it lie outside the scope of Posidonius' narrative. Similar considerations explain the corresponding omissions from Vitruvius, who is describing, not all of prehistory, but only a specific portion of it, beginning with the social stage of man's development.

The *sapientes* of Posidonius bear a certain resemblance both to the individual inventors mentioned by Diodorus and Vitruvius and to those *ingenio qui praestabant et corde vigebant*, to whom Lucretius assigns a prominent role in the development of technology. But the resemblance should not be overemphasized. Individual inventors, though their discoveries are taken over and imitated by others, do not form a separate class. The inventor of one day would be the passive observer of the next, according to the vagaries of accident and suggestion. And though the number of men of surpassing *ingenium* at any given time might be small in comparison with the total population, these men would not form a closed corporation with access to a continuous and universal flow of inspiration. There is thus no reason to abandon our earlier contention (above, pp. 18–19) that the *sapientes* represent a modification introduced by Posidonius himself into a tradition which was originally without them.

This conclusion is, in fact, confirmed by a further contrast between Posidonius and the authors whose accounts are reproduced under headings 4A, B, and C. Neither Tzetzes nor Posidonius describes the origin of society for the simple reason that, in their view, society's beginnings are coeval with those of the race. Tzetzes (*VS* II 137.41–42) describes primitive men's mutual defense against the wild beasts in terminology which may be bor-

rowed from Diodorus. Unlike Diodorus, however, he views this defense, not as something to which men resort under the pressure of necessity, but as an expression of the *philallêlia* which was characteristic of the race even in the earliest phases of its existence. Similarly, Posidonius sees in the *primi mortalium* men who *naturam incorruptam sequebantur* (90.4)—hence displayed from the outset a willing submission to the rule of the better, i.e. the *sapientes*, in their midst.[16] It is just possible that this notion of prehistory, which removes the social aspect of man's existence from an evolutionary perspective, is the original one in the tradition we are examining, and that the extension of this perspective to include society—an extension which appears in Diodorus, Vitruvius, and Lucretius—is a later development. But the possibility must be considered a very remote one. For it is hard to believe that the intimate relationship which exists between the technological and sociological aspects of the narratives of Diodorus, Vitruvius, and Lucretius is the result of revisions introduced into a theory which was originally concerned only with the development of technology. For Posidonius, it is the presence of the *sapientes* and, for Tzetzes, the assumption of primitive *philallêlia* which makes possible the elimination of sociological considerations; and by this token both motifs are revealed as foreign to the original form of the theory which our texts are following.[17]

5. (A) *Further development of technology made possible by the discovery of fire:* (B) *mining and metallurgy, producing tools which are used in the development or improvement of* (C) *warfare,* (D) *weaving, and* (E) *agriculture;* (F) *cumulative character of the process.*

Diodorus	Lucretius	Tzetzes
(A) γνωσθέντος δὲ τοῦ πυρὸς καὶ τῶν ἄλλων τῶν χρησίμων, κατὰ μικρὸν καὶ τὰς τέχνας εὑρεθῆναι καὶ τἆλλα τὰ δυνάμενα τὸν βίον ὠφελῆσαι. (1.8.8)	(A) inque dies magis hi victum vitamque priorem / commutare novis monstrabant rebus et igni / ingenio qui praestabant et corde vigebant. (5.1105–7)	(A) ἐπεὶ δὲ προμηθέστεροι γεγονότες καὶ προβουλευτικώτεροι τὸ πῦρ ἐφεῦρον . . . καὶ τὴν τοῦ βίου ἐκείνου μετέστρεψαν διαγωγήν. (138.8–10)

[16] Posidonius' praise of philosophy as the force which *sparsos et cavis casis tectos . . . docuit tecta moliri* (90.7) suggests that he associated the *sapientes* with the founding of cities, hence with the creation of society in its higher phases. He may even have been influenced in some degree by the other tradition, found in Cicero and the euhemerizers (see below, Chap. VI, note 23), which made certain outstanding individuals responsible for ending a completely savage and cannibalistic state of nature. But such influence, if present, does not affect substantially the tone of his account or the character of the early men there described: *alti spiritus . . . et . . . a dis recentes* (90.44; on the probable Posidonian origin of this phrase, see Nock, *JRS* 49.7).

[17] The distinction, present in Stages 2 and 3, between inventions which originate in one individual and those which are the common achievement of the race was probably the starting point both for the Posidonian innovation of the *sapientes* and for Diodorus' (or his source's) introduction of Egyptian gods.

DIODORUS	LUCRETIUS	POSIDONIUS
(B) ἐν τῇ Θηβαΐδι χαλκουργείων εὑρεθέντων καὶ χρυσείων,	(B) quod superest aes atque aurum ferrumque repertumst / ... / ignis ubi ingentis silvas ardore cremarat / ... flammeus ardor / ... terram percoxerat igni, / manabat venis ferventibus in loca terrae / concava conveniens argenti rivus et auri, / aeris item et plumbi. quae cum concreta videbant / posterius claro interea splendere colore / tollebant nitido capti levique lepore / et simili formata videbant esse figura / atque lacunarum fuerant vestigia cuique. / tum penetrabat eos posse haec liquefacta calore / quamlibet in formam et faciem decurrere rerum, / et prorsum quamvis in acuta ac tenvia posse / mucronum duci fastigia procudendo. (5.1241–65)	(B) in hoc quoque dissentio sapientes fuisse qui ferri metalla et aeris invenerint cum incendio silvarum adusta tellus in summo venas iacentes liquefactas fudisset. (90.12)
		in illo quoque dissentio a Posidonio quod ferramenta fabrilia excogitata a sapientibus viris iudicat. (90.11)
(C) ὅπλα τε κατασκευάσασθαι δι' ὧν τὰ θηρία κτείνοντας	(C) arma antiqua manus ungues dentesque fuerunt / et lapides et item silvarum fragmina rami / et flamma atque ignes postquam sunt cognita primum. / posterius ferri vis est acrisque reperta. (5.1283–86)	
	(D) nexilis ante fuit vestis quam textile tegmen. / textile post ferrumst quia ferro tela parantur / nec ratione alia possunt tam levia gigni / insilia ac fusi radii scapique sonantes. (5.1350–53)	(D) Posidonius . . . textrini quoque artem a sapientibus dixit inventam. . . .
(E) καὶ τὴν γῆν ἐργαζομένους φιλοτίμως ἐξημερῶσαι τὴν χώραν. (1.15.5)	(E) at specimen sationis et insitionis origo / ipsa fuit rerum primum natura creatrix, / arboribus quoniam bacae glandesque caducae / tempestiva dabant pullorum examina subter; / unde etiam libitumst stirpis committere ramis / et nova defodere in terram virgulta per agros. (5.1361–66)	(E) transit deinde ad agricolas nec minus facunde describit proscissum aratro solum . . . hoc quoque opus ait esse sapientium. (90.20–21)

VITRUVIUS	LUCRETIUS
(F) tum autem instruentes animo se et prospicientes maioribus cogitationibus ex varietate artium natis non casas sed etiam domos . . . perficere coeperunt. (36.8–12)	(F) alid ex alio clarescere corde videbant / artibus ad summum donec venere cacumen. (5.1456–57)

The parallels between the passages in which Tzetzes and Lucretius mention the effect of fire on man's way of life have already been noted (above, p. 22). The portion of Diodorus printed under A does not recall the phraseology used by the other two writers, but it presents an identical idea. And though there is nothing in Posidonius on the initial discovery of fire, the smelting of metals and fashioning of tools described in B in his account would obviously be impossible without it.

Weaving (D) follows the discovery of metal because, as Lucretius notes, it is impossible without the use of iron tools. Agriculture, though its beginnings may go back to the discovery of grain (3D),[18] is greatly advanced by the use of metals—hence its mention at this point. The plow (Posidonius),[19] the grafting of trees (Lucretius), and the extension of the land under cultivation (Diodorus and Lucretius) are all examples of such advances.[20] Both Diodorus and Lucretius note the connection, although Lucretius mentions it in his passage on metallurgy rather than in the section devoted specifically to agriculture.[21] Also common to both writers is an indication of the implications of the discovery of metals for warfare (C). Lucretius includes here, and Diodorus in a subsequent passage,[22] a brief description of earlier methods of fighting. This item could go equally well at an earlier stage and is, in fact, found there in Tzetzes.[23] The discrepancies here are rather minor, suggesting individual modifications introduced into a common tradition.

One additional text should be included at this point. The priest Leo's

[18] Although Diodorus does not mention farming explicitly in 3D, the passage in 1.14 which explains the custom of offering first fruits at harvest time as a survival of honors first paid to Isis as the discoverer of grain suggests that it was among the *beneficia* which she conferred on the race.

[19] And possibly the source followed by Diodorus. Cf. Tibullus, 1.7.29 and Philostephanus *ap.* Servius *ad Georg.* 1.19 (=Fr. 28 Müller), where Osiris is made the discoverer of the plow.

[20] Agriculture, like weaving, is not mentioned explicitly by Lucretius until a fairly complex stage in its development has been reached. In his source more may have been said about the antecedent phases: see the passage from Diogenes of Oenoanda discussed below, p. 56.

[21] 1287–95: et prior aeris erat quam ferri cognitus usus. / . . . / aere solum terrae tractabant aereque belli / miscebant fluctus et vulnera vasta serebant./ . . . / inde minutatim processit ferreus ensis / versaque in opprobrium species est falcis ahenae / et ferro coepere solum proscindere terrae.

[22] 1.24.3: *διὰ τὸ κατ' ἐκείνους τοὺς χρόνους μήπω τῶν ὅπλων εὑρημένων τοὺς ἀνθρώπους τοῖς μὲν ξύλοις ἀμύνεσθαι τοῖς ἀντιτατομένοις, ταῖς δὲ δοραῖς τῶν θηρίων σκεπαστηρίοις ὅπλοις χρῆσθαι.* On the context in which this passage appears—Diodorus' account of the Greek and Egyptian Heracles—see below, pp. 44–45.

[23] 137.41–2: *καὶ ἀλλήλοις κατὰ θηρίων προσεβοήθουν καὶ συνεμάχοντο γυμνοὶ γυμναῖς ταῖς χερσί.*

account of the beginnings of weaving has already been mentioned (above, p. 20) as completing the "Egyptian" parallels to the sequence of development presented in Lucretius 5.1105–1366. Two authors, Hyginus and Tertullian, preserve a record of Leo's account:

> cum Liber Aegyptum . . . regno teneret et omnia primus hominibus ostendisse diceretur, Hammon quendam ex Africa venisse et pecoris multitudinem ad Liberum adduxisse quo facilius et eius gratia uteretur et aliquid primus invenisse diceretur. . . . (Hyginus, *Astron.* 2.20)
>
> [In the time of Osiris] ad illum ex Libya Hammon fecit ovium dives. . . . denique Mercurium autumant forte palpati arietis mollitie delectatum deglubasse oviculam, dumque pertemptat et (quod facilitas materiae suadebat) tractu prosequente filum eliquat[24] in pristini retis modum quem philyrae taeniis iunxerat texuisse. (Tertullian, *De pallio* 3)

The parallels between these passages and those we have been considering—especially those given under headings 3C, 4C, and 5B—could hardly be closer. Here, as in Diodorus (4C), the background for discovery is Osiris' institution of rewards for inventors (cf. *quo facilius eius gratia uteretur* in Hyginus); and the process of discovery is exactly that which led earlier to fire and metal tools. A chance occurrence (cf. *forte palpati arietis* in Tertullian) is followed by pleasure (*mollitie delectatum*—cf. the pleasure at the fire in Diodorus [3C] and *capti lepore* in Lucretius [5B]), and while attention is occupied in this fashion the useful application suggests itself. Like the observers of the nests of birds in Vitruvius (3A), Mercury is helped in the last stage of the process by having a model ready at hand: the strands of wool are woven together in imitation of a net of *taeniae*. This is still *nexile* rather than *textile tegmen* (cf. Lucretius [5D]); perhaps the transition to the latter came later in Leo's account.[25]

Although the technologies which appear in this stage are fairly complex, the process leading to their discovery is essentially similar to that envisioned in Stage 3: observation and direct imitation of nature, combined in some instances with the application of suggestions received from nature to slightly different contexts. From the pools of molten metal which take the shape of the ground over which they flow to the metal tools they suggest (5B) is perhaps a greater leap of the imagination than anything required in Stage 3, but the difference is one of degree rather than kind. The greater achievements of Stage 5 do not come from the application of intellectual powers of a higher order. They are simply the result of the phenomenon mentioned by Lucretius and Vitruvius in 5F: one thing leads to another (*alid ex alio clarescere corde videbant*) so that, as technology becomes more com-

[24] So the *mss.* and editors, though *elicit* would seem to be the obvious and necessary correction.

[25] For the Egyptians as inventors of weaving, see Ephorus *FGrH* 70F5; Pliny, *NH* 7.198.

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plicated, the range and number of situations out of which suggestions for new inventions arise is vastly increased. *Maiores cogitationes* are involved; but they are, as Vitruvius makes clear, the result, not the cause, of a vastly increased *varietas artium.*[26]

6. *Summary of the factors involved in the growth of the useful arts: accumulated experience and man's natural endowments: hands, intelligence, rational speech.*

LUCRETIUS

usus et impigrae semel experientia mentis
paulatim docuit pedetemptim progredientis.
sic unumquicquid paulatim protrahit aetas
in medium ratioque in luminis erigit oras. (5.1452–55)

VITRUVIUS

[Men came together] habentes ab natura praemium praeter reliqua animalia ut non proni sed erecti ambularent mundique et astrorum magnificentiam aspicerent, item manibus et articulis quam vellent rem faciliter tractarent. (34.2–6)

cum ergo natura non solum sensibus ornavissent gentes quemadmodum reliqua animalia sed etiam cogitationibus et consiliis, et subiecisset cetera animalia sub potestate . . . e fera agrestique vitam ad mansuetam perduxerunt humanitatem. (36.1–8)

DIODORUS

καθόλου γὰρ πάντων τὴν χρείαν αὐτὴν διδάσκαλον γενέσθαι τοῖς ἀνθρώποις, ὑφηγουμένην οἰκείως τὴν ἑκάστου μάθησιν εὐφυεῖ ζώῳ καὶ συνεργοὺς ἔχοντι πρὸς ἅπαντα χεῖρας

καὶ λόγον καὶ ψυχῆς ἀγχίνοιαν. (1.8.9)

TZETZES

[Pandora stands for] ἡ πάντα δωρουμένη τῷ βίῳ συναγωγὴ τῶν τεχνῶν ἢ ἡ ἐκ πάντων τῶν θεῶν καὶ τῶν ψυχικῶν δυνάμεων . . . συγκεκραμένη καὶ δῶρα λαβοῦσα, ἐκ μὲν γὰρ πυρὸς Ἡφαίστου τὰ ὑλικὰ καὶ ὀργανικά, ἐκ δὲ τῆς φρονήσεως Ἀθηνᾶς τὸ κατασκευαστικὸν καὶ ἀγχίνουν . . . τὸ δ' ἀναιδὲς καὶ δραστήριον . . . ἐκ τοῦ Ἑρμοῦ . . . τοῦ προφορικοῦ λόγου. (79.13–21 Gaisford)

A summary of this sort could come at almost any point in an account of the development of technology. Diodorus and Tzetzes append it to their descriptions of the first consequences of the discovery of fire; Vitruvius separates it into two passages which frame his account of the development of architecture; Lucretius uses it as a conclusion to his entire narrative. Such differences, however, are relatively unimportant. Diodorus gives the most complete version of a view which is essentially identical with those of Vitruvius and Tzetzes and which may lie behind Lucretius' text as well.

[26] With Lucretius compare Manilius 1.89–90: *tum belli pacisque artis commenta vetustas*; / *semper enim ex aliis alias proseminat usus.* Vitruvius' idea is more distinctive and may go back ultimately to pre-Socratic theories of the intimate connection between what men perceive and experience and what they think (cf., for example, Empedocles, *VS* 31B106: πρὸς παρεὸν γὰρ μῆτις ἀέξεται ἀνθρώποισιν). Its presence, at any rate, argues strongly against the attempt to trace all or part of Vitruvius 2.1 to Posidonius, or any other teleological source. See Appendix II.

Need (*chreia*) (or perhaps "need and use," the utilitarian principle)[27] provides suitable instruction to a creature "naturally fit for it" (*euphyes*) and having as "co-workers" in all things, "hands, rational speech (*logos*), and sharpness of mind (*anchinoia*)." The function of the co-workers is fairly clear. Hands make possible the manufacture of tools; rational speech enables the communication and sharing of discoveries (cf. 4C); and *anchinoia* observes and capitalizes upon those natural processes or accidents which can be made to serve man's purposes. The exact meaning of the phrase ζῷον εὐφυές is less certain. A comparison with Vitruvius, whose text is quite close at this point, suggests that man's upright stature is the natural suitability involved, and this is probably the most satisfactory interpretation.[28] It explains better than anything else the conception of hands, sharpness of mind, and speech as co-workers. For man's upright stature is what frees the hands for specialization as tool-makers and users;[29] and by causing his gaze to go forward rather than down it subjects a larger portion of his environment to the action of *cogitationes* and *consilia*: by virtue of his being a fore-looker, man becomes a fore-thinker as well.[30] For the same reason, speech is made to proceed forth in the manner best suited to catch the attention of others;[31] and the specialization of hands as tool-users enables the mouth to be used exclusively for communication.[32]

[27] Compare *usus et experientia* in Lucretius; and for *usus* as the Latin rendering of *chreia*, see Spoerri, 145, note 9. The fluctuation of meaning to which the word *chreia* is subject (cf. Dihle, *Entretiens Hardt* 8.212, note 1, and Thraede, *RhM* 105.167–68) is usually of minor importance in interpreting a given piece of *Kulturentstehungslehre* (hence the translation, "need and use," suggested by Havelock, 77 and 392). *Chreia-usus* is not simply practice or application but the applying or putting into practice of what is useful or needful (*utile, chrêsimon*); and *chreia-egestas* is not in and of itself man's teacher—only the impelling force behind his continuing efforts to find new *usus* for the various components of his environment.

[28] So Pfligersdorfer, *SBWien* 232, No. 5, 138, comparing Gregory of Nyssa, *Hom. opif.* 8.144BC; cf. also the mention of man's upright stature at the end of the zoogony of Johannes Catrarius (*VS* 68B5, p. 137.20–21), a passage which closely parallels those which both Tzetzes and Diodorus prefix to their *Kulturentstehungslehren* (see above, Chap. I, note 16). Spoerri (151) suggests that *tachos mathêseôs* or *docilitas* is meant, citing Ps.-Plato, *Horoi* 413D, where *euphyia* is so defined. This is certainly the general sense required by ὑφηγουμένην οἰκείως τὴν ἑκάστου μάθησιν; but it is too close in meaning to *anchinoia* (defined as *euphyia psychês* in *Horoi* 412E and listed along with *mnêmê* and *tachutês dianoias* as a component of *eumathia* in Photius, *Cod.* 249 440B39–441A3); and it does not explain *synergous*. There is no clear and precise reason for the joint effectiveness of *docilitas*, hands, *logos*, and *anchinoia*, as there is for that of the latter three and upright stature.

[29] Cf. Aristotle, *Part. anim.* 4.686A25–28 and 687A5–7 and Xenophon, *Memorabilia* 1.4.11. Though not explicitly present in the latter passage, the idea seems to be implied; see Dickermann, 14.

[30] Cf. Xenophon, *Memorabilia* 1.4.11; Aristotle, *Part. anim.* 3.662B20–22; Cicero, *ND* 2.140 and the etymologies of *prosôpon* reproduced in Dickermann, 18, note 1. Theiler (29 and 32) derives the first two texts from Diogenes of Apollonia, citing their references to the purer air which man's erect stature enables him to breathe (cf. *VS* 64A19, p. 56.13–14).

[31] Aristotle, *Part. anim.* 3.662B20–22.

[32] Cf. Gregory of Nyssa, *Hom. opif.* 8.144BC, 148C–49A—especially 144B: τῇ τοῦ λόγου χρείᾳ συνεργός ἐστι ἡ τῶν χειρῶν ὑπουργία, and 144C: συνεργεῖν φημὶ τὰς χεῖρας τῇ ἐκφωνήσει τοῦ λόγου.

Diodorus does not go beyond the biological idea of a cooperation between man's upright stature and his other qualities to make possible a more effective utilization of both.[33] To this Vitruvius adds a purely teleological conception: man's upright position enables him to observe *mundi et astrorum magnificentiam.* The implication is, to judge from other contexts where the idea occurs, that the sight of the starry heavens awakens man to an awareness of a destiny higher than that of the creeping and crawling things around him.[34] The discrepancy between Diodorus and Vitruvius is sharp, but is probably due to Vitruvius himself. The note struck here is an isolated one in his text, which elsewhere shares the non-teleological or even anti-teleological mood of Diodorus and Lucretius.[35] Rather than assume a consistent deletion of teleological material from all three, one must conclude that Vitruvius has here expanded his source with a philosophical commonplace quite alien to it.

7. (A) *The non-essential arts, including* (B) *astronomy and* (C) *music.*

VITRUVIUS

(A) postquam animadverterunt profusos esse partus naturae et abundantem materiae copiam ad aedificationes ab ea comparatam, tractando nutrierunt et auctam per artes ornaverunt voluptatibus elegantiam vitae. (36.14–18)

DIODORUS	LUCRETIUS	POSIDONIUS
(B) περί τε τῆς τῶν ἄστρων τάξεως	(B) sol et luna . . . / perdocuerunt homines annorum tempora verti / et certa ratione geri rem atque ordine certo. (5.1437–39)	

[33] Although most of the parallels to Diodorus cited above in notes 28–32 come from passages of a definitely teleological character, it does not follow (as Pfligersdorfer, *SBWien* 232, No. 5, 135–42, and Spoerri, 148–52, maintain) that the passage itself has a teleological source. Aristotle's famous reinterpretation of Anaxagoras' view of the importance of the human hand (*VS* 59A102) shows that arguments of this sort could be found in a non-teleological setting and were, perhaps, first devised for such a setting (against the attribution of teleological views to Anaxagoras, see Theiler, 1–5, and Vlastos, *PhilRev* 55.53, note 3). Similarly, the fragment of Anaxagoras (*VS* 59B21b) which speaks of man's ability, through experience, memory, skill, and technique, to get honey and milk from the animals is not itself teleological in character—although it calls attention to a fact which was to be adduced frequently in later thought of a teleological cast as evidence for the existence of a divine plan by which man was provided with sufficient sustenance. (For another example of competing naturalistic and teleological use of the same material, see below, Chap. III, note 12.) Οὐδὲν χρῆμα μάτην γίνεται was a principle to which naturalists (cf. Leucippus, *VS* 67B2) as well as teleologists subscribed; and references to man's special physical endowments would be at home in the writings of either school. Indeed, it is hard to see how any consistent naturalistic attempt to explain the unique character of human achievement could have dispensed with such references.

[34] See the examples collected by Dickermann, 93–101, S. Pantzerhielm Thomas, "The Prologues of Sallust," *SO* 15/16 (1936) 146–51. Even this idea is not necessarily teleological. Cf. Aeschylus, *PV* 454–57, and Lucretius 5.1437–39 (quoted below under 7B), where observation of the heavens is said to have given men practical information about the earthly seasons.

[35] Against Pfligersdorfer's teleological interpretation (*SBWien* 232, No. 5, 135–42) of the important role assigned to *chreia* and *didachê* in Diodorus 1.8, see Spoerri, *MusHelv* 18.74–76; and, for alleged teleological elements in other portions of Vitruvius 2.1, see below, Appendix II.

DIODORUS	LUCRETIUS	POSIDONIUS
(C) καὶ περὶ τῆς τῶν φθόγγων ἁρμονίας . . . τοῦτον [Hermes] πρῶτον γενέσθαι παρατηρητήν . . . καὶ τῆς εὐρυθμίας καὶ τῆς περὶ τὸ σῶμα πρεπούσης πλάσεως ἐπιμεληθῆναι. (1.16.1)	(C) at liquidas avium voces imitarier ore / ante fuit multo quam levi carmina cantu / concelebrare homines possent aurisque iuvare. / et zephyri cava per calamorum sibila primum / agrestis docuere cavas inflare cicutas. (5.1379–83)	(C) vis scire quid illa [philosophia] eruerit? non decoros motus corporis nec varios per tubam ac tibiam cantus quibus exceptus spiritus aut in exitu aut in transitu formatur in vocem. (90.26)

With these items an entirely new phase is reached. Diodorus and Lucretius agree in making music and astronomy the last, or among the last, of technologies to be discovered. Posidonius' remarks on music probably occupied a similar position in his account of the development of culture.[36] None of these authors gives an explanation for this arrangement, but a comparison with Vitruvius supplies one. The latter notes that, after men had observed that they had on hand an *abundantem copiam* for building, they proceeded to *ornare voluptatibus* a life which was already *auctam per artes*. The sequence *artes-copiam-voluptates* here applies only to the history of architecture, but it is probably to be connected with the distinction, drawn first by Democritus (B144) and mentioned sporadically in subsequent writers,[37] between those arts which have their origin in necessity and those which, like music, arise only when a condition of surplus has arisen.[38] The reference to music, which Vitruvius' exclusively architectural subject makes impossible, is found in Lucretius, Diodorus, and Posidonius. Lucretius adds astronomy, and Posidonius dancing, to the list of "non-essential" *technai*; Diodorus, as often, is more complete: astronomy, writing, music, dancing, and wrestling are all to be found among the inventions of Hermes.[39]

[36] Such is suggested at any rate by the location of 7C in Seneca's account, following the items reproduced earlier in our text (2A; 5B, D, E) and before later references to those inventions which can be assigned to specific *sapientes* of historical times: Anacharsis and Democritus (90.31).

[37] E.g. Isocrates, *Bus.* 15; Aristotle, *Met.* 1.981B13–22; Plutarch, *Div.*, p. 113.1–9 Bernardakis; Maximus of Tyre, 32.3b. For the wording in Vitruvius cf. Cicero, *Tusc.* 1.62: *mansuefacti et exculti a necessariis artificiis ad elegantiora defluximus*. The parallel between Vitruvius and Democritus is noted by Blankert, *Seneca ep.* 90, pp. 139–40.

[38] Unlike Democritus and the texts cited in the preceding note, Vitruvius speaks of a natural *copia* of whose existence men first become aware at an advanced stage of culture rather than a *copia* of life's necessities which they themselves have created. Strictly speaking, then, the succession of *artes-voluptates* is the only idea common to Vitruvius and Democritus. It is quite possible, however, that the Democritean conception was the one found in Vitruvius' source. The context in which the whole passage appears is a discussion of the various types of natural building materials with whose properties and uses the architect must be familiar—hence the substitution of a *copia ab natura comparata* for one which was *comparata ab hominibus* would have been quite natural.

[39] Diodorus mentions the three-stringed lyre as a specific musical invention of Hermes, and behind this item in his list there may lie a more detailed account of the process of discovery on lines comparable to those which appear in Lucretius (5B and 3C), Diodorus (3C) and Vitruvius (3C).

8. *Conclusion:* (A) *the state of civilization described in our earliest written documents;* (B) *their late origin accounts for the speculative character of all reconstructions of prehistory.*

DIODORUS	LUCRETIUS
(A) κατὰ τοὺς Τρωικοὺς χρόνους, ὅτε τα πλεῖστα μέρη τῆς οἰκουμένης ἐξημέρωτο γεωργίαις καὶ πόλεσι καὶ πλήθει τῶν κατοικούντων τὴν χώραν πανταχοῦ. (1.24.5)	(A) iam validis saepti degebant turribus aevum et divisa colebatur discretaque tellus, iam mare velivolis florebat. . . .[40] auxilia ac socios iam pacto foedere habebant,
(B) τοὺς μὲν οὖν πρώτους ὑπάρξαντας βασιλεῖς οὔτ' αὐτοὶ λέγειν ἔχομεν οὔτε τῶν ἱστορικῶν τοῖς ἐπαγγελλομένοις εἰδέναι συγκατατιθέμεθα· ἀδύνατον γὰρ τὴν εὕρεσιν τῶν γραμμάτων οὕτως εἶναι παλαιὰν ὥστε τοῖς πρώτοις βασιλεῦσι ἡλικώτιδα γενέσθαι. εἰ δέ τις καὶ τοῦτο συγχωρήσαι, τό γε τῶν ἱστοριογράφων γένος παντελῶς φαίνεται νεωστὶ τῷ κοινῷ βίῳ συνεσταμένον. (1.9.2)	(B) carminibus cum res gestas coepere poetae tradere; nec multo prius sunt elementa reperta. propterea quid sit prius actum respicere aetas nostra nequit nisi qua ratio vestigia monstrat. (5.1440–47)

No extended account of the phase of development inaugurated in Stage 7 is given in our texts. The reason is to be found in the considerations which appear here. Among the "non-essential" arts is writing (cf. its attribution to Hermes in Diodorus [7B]). Its invention, along with that of heroic poetry (of whose oral beginnings antiquity was, naturally, unaware), brings to an end the period with which our accounts are concerned. Henceforth investigation of the past must take as its starting point written records, not the *vestigia* pointed out by *ratio*. Tracing the growth of music and the fine arts belongs largely to history, not prehistory.

The items from Diodorus printed above are included with some hesitation, inasmuch as they do not round off his account in the way their counterparts in Lucretius do. They are, however, concerned with the same subject: delimiting the confines of history and prehistory. 8A occurs in the course of an attempt to show that the real author of the labors of Heracles was, not Heracles, but "another man of the same name"—an Egyptian who lived many centuries before his Greek imitator. The club and the lion's skin and the slaying of wild beasts would, Diodorus argues, have been completely

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Cf. Isidore, *Orig.* 3.22.8: "cum regrediens Nilus in suos meatus varia in campis reliquisset animalia, relicta etiam testudo est. quae cum putrefacta esset et nervi eius remansissent extenti intra corium, percussa a Mercurio sonitum dedit, ad cuius speciem Mercurius lyram fecit." With the list compare also Cicero, *Tusc.* 1.62 (above, note 37) where the first three items—writing, music, and astronomy—are mentioned among the "superfluous" arts.

[40] With the walled towns and sailing of 1440–42 one should perhaps compare two passages in Seneca, *Ep.* 90: *non arma nec muros nec bello utilia molitur philosophia* (26) and *posse nos vestitos esse sine commercio sericorum* (15). But reference to commerce and walled cities as among the most striking of man's achievements would have been, by the first century A.D., so commonplace that the parallels are not necessarily significant. Cf. Manilius 1.87–88, Cicero, *Off.* 2.13 and 15; Sophocles, *Ant.* 334–35, 368–70; Euripides, *Suppl.* 209–10; Aeschylus, *PV* 467–68.

outmoded at the date assigned to the son of Alcmena, when men were already dwelling in cities and the land had been cleared of forests to make way for agriculture. The original Heracles obviously belongs to the earliest stages of human life. The cities and agriculture mentioned here are paralleled in Lucretius, and both writers are referring to the same period—the generations just before the Trojan war, which witnessed the labors of Heracles and were the earliest period dealt with in Greek poetry.[41] The ship-filled sea and the international alliances of 1442–43 are possibly references to the navy of Agamemnon and the oath of the suitors, both of which figured in an earlier and more famous analysis of the state of society described in the earliest Greek poetry (Thucydides 1.9).[42] Diodorus and Lucretius thus characterize the same period—the time of the Trojan war and the generations immediately preceding it—in identical terms; and contrast it, explicitly or implicitly, with what had gone before. Conceivably, Diodorus drew his observations from a context similar to the one in which their Lucretian counterpart appears.

Further evidence for the existence of such a context in Diodorus' source is provided by 8B.[43] The passage is from a transitional section at the end of the introduction to Book I, where it is clearly out of place.[44] The remarks on the late origin of writing and written records (here history rather than poetry) are the same which Lucretius makes, and Diodorus introduces these remarks, just as Lucretius does, in connection with the mention of a situation (here rule by kings) whose presence is characteristic of the earliest period described in written accounts. Kingship obviously antedates these records, just as does the city life to which Lucretius refers (cf. *iam* in 1440); hence kingship receives from these records only a *terminus ante quem.* The earlier phases of kingship, like the prior history of the developed civilization described in 1440–44, cannot be known in detail with any accuracy. The similarities here are rather extensive; given the other parallels between the two texts, they may well be more than coincidental.

The passages given under heading 8 form a natural conclusion to what has been a remarkably consistent and closely-reasoned whole. Even more strongly than the verbal parallels pointed out in Chapter I, this underlying

[41] Presumably the poets to whom Lucretius refers are those of the epic cycle. The earliest events they recounted (apart from the mythical Titanomachia) were those of the Theban cycle, contemporary with the labors of Heracles or slightly before them. A similar line of reasoning on the origin of heroic poetry may lie behind an item in Pliny's catalogue of inventors: *de poematum origine magna quaestio. ante Troianum bellum probantur fuisse* (*NH* 7.205).

[42] On the parallels between Lucretius 5.1440–47 and the Archaeology see, in general, M. F. Smith, "Lucretius, *De rerum natura*, v. 1440–7," *Hermathena* 98 (1964) 49–50.

[43] The parallel between this passage and Lucretius 5.1444–47 was first pointed out by Dahlmann, 39, note 1.

[44] See Appendix I, pp. 177–78 and 191.

unity and coherence of plan requires the theory of a common source. One further type of evidence remains to be considered. If our texts can be shown to be characterized, not simply by a unity, but also by a uniqueness of plan, their derivation from a common source can be regarded as almost certain. Obviously, certain features of the view of prehistory we have just analyzed can be paralleled elsewhere; but that the view, taken as a whole, *is* virtually unique will become clear as we attempt to define its essential character and consider it in relation to the basic conceptions which underlie other ancient discussions of the origin of technology.

CHAPTER THREE

ALTERNATE PATTERNS OF *KULTURGESCHICHTE*: POSSIBLE SOURCES

The character of the historical process as conceived in the texts under examination is correctly, though only partially, described by the summary references, printed together under Stage 6 (above, p. 40), to the interaction of need, intelligence, hands, and erect stature. All these factors enter into the process of human development; yet it would be impossible, given a bare mention of them and nothing more, to reconstruct the course which that development takes. One could only say that the conception of progress involved is clearly naturalistic and anti-teleological, even if it does not ascribe everything to biological necessity. It would be impossible to add much specific or detailed information about the way in which this conception is developed.

The most important and most characteristic feature of our five texts is to be found elsewhere—in the importance which all of them assign to the individual technological advance, an advance which is always plausibly accounted for in terms of empiricist psychology as the result of accident, imitation, or suggestion. The human motivation in each episode is basically utilitarian, though hedonistic factors play their role. The warmth of the fire and the bright patches of congealed metal attract first by the pleasure they afford; a perception of their usefulness comes only later. And in the adoption of grain as a food (Diodorus [4D]), pleasure, though it comes first, is doubtless as important as utilitarian considerations (putting an end to cannibalism) in effecting the change. Such individual episodes are the basic and essential units in the entire cultural process. Progress is simply an accumulation of them, multiplied indefinitely because of the social character of the medium in which they occur. For the gradualistic conception of the inventive process involved here to be acceptable, there must be no gaps in the final account, no stages in the development of culture which are not thoroughly motivated. Hence the detail with which each episode is described and the preoccupation with establishing a proper sequence of developments which is evident in Lucretius and Posidonius.[1] History, though built up of discrete events, must attempt to approximate a continuum at all points. It is this attempt which

[1] Cf., for Lucretius, 5.1350–53 (Stage 5D, above), and for Posidonius, Seneca's contemptuous reference (90.13) to the *subtilis quaestio* as to whether *forcipes* or *malleus* came first.

gives to our accounts their essential and most characteristic features; and it is this which should form the point of departure in the attempt to place their theory into the general context of ancient *Kulturgeschichte*.

Euhemerist and heurematistic writings. The texts considered in Chapters One and Two are in a sense catalogues of inventions; and one of those texts, Diodorus 1.13–29, links its *Kulturgeschichte* very closely to an explanation of the origin of religion which is quite similar to that given by Euhemerus (see below, pp. 153–55). It should thus come as no surprise that the writings of euhemerizers and heurematists provide the closest parallels of detail to our five accounts. In these works one finds on occasion, in addition to the simple mention of an inventor, divine or human, a description of the actual process of discovery which recalls Diodorus, Vitruvius, and Lucretius. So, for example, we are told that the Phoenicians discovered the use of Tyrian purple when a dog bit into a shell lying on the beach and stained its mouth; and poetry came into being when a chance rhythmical utterance struck the fancy of a listener, who then imitated its pattern himself.[2] The most significant and extensive of such passages is the one from Leo on the origins of weaving (see above, pp. 38–39). The tradition represented in our texts was thus not alone in the way it conceived of the separate stages of the inventive process. But with the exception of Diodorus I, where there has been extensive contamination, neither euhemerizers nor heurematists offer any clear parallel to the way in which our tradition viewed the inventive process as a whole. The entire tendency of the careful analysis which our texts give to the role played by accident and suggestion in that process is to show that inventions, even if they go back to individuals, are nothing out of the ordinary. Many of them are insignificant when considered separately; it is only their cumulative effect which is able to transform the character of man's existence. For the euhemerist, on the other hand, individual discoveries are something so out of the ordinary that they result in the conferring of divine honors on the man responsible for them. The two traditions might well borrow and adopt motifs from each other;[3] and either

[2] See Cassiodorus, *Variae* 1.2.7 (Tyrian purple); Gregory Nazianzenus, *Or.* 4.108 (poetry). Of particular significance is Cassiodorus' comment: "ut est mos hominibus occasiones repentinas ad artes ducere, talia exempla meditantes, fecerunt principibus decus nobile." Resemblances between the *heurêmata* given by Cassiodorus and the list in Hyginus 274 (see Knaacke, *Hermes* 16.593–600; Kremmer, 90–94) show that the account they follow is at least as old as the second century A.D.

[3] The most conspicuous example is, of course, the euhemerized and Egyptianized *Kulturgeschichte* of Diodorus I. A long list of less extensive borrowings could easily be compiled. So, for example, Dionysus is credited with introducing the art of food gathering (Diodorus 2.38.5), Isis or Osiris with the discovery of grain and the ending of cannibalism (Plutarch, *Is. et Os.* 13.356A; Apuleius, *Met.* 11.2; and the aretalogies collected and edited by Harder, *AbhBerlin* 1943, 14.7–23); and Uranus with the introduction of agriculture (Diodorus 3.56.3). The euhemerizing account of

could incorporate on occasion the point of view which is typical of the other. The euhemerist might find some inventions too trivial to serve as satisfactory *aitiai* for a divine cult; and the other school could recognize occasions when the achievement of an individual was so remarkable as to win him special recognition from society.[4] Such minor parallels do not, however, lessen the basic difference in approach.

The heurematistic writers, insofar as they speak of mortals or whole nations as inventors, offer a somewhat closer parallel. But the resemblance is still only partial. The whole idea of assigning to named inventors the most basic discoveries is out of keeping with the theoretical and inferential method announced at the end of Lucretius V. Such a procedure belongs to history, not prehistory. Moreover, though heurematistic works need not always have taken the form of bare catalogues,[5] any coherent arrangement they gave to their narrative would almost inevitably have been topical, tracing the growth of each art from its beginning to the author's own day. Such a method would have made any connected historical reconstruction of primitive life almost impossible.[6] Once more, it is fairly clear that, if there are

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Diodorus V (source unknown) contains a whole series of such attributions. Mnemosyne is the discoverer of writing (67.3), Hestia of houses (68.1), the Idaean dactyls of metallurgy (64.1), the Curetes of hunting (64.1), etc. Cf. also the "Phoenician" anthropology of Sanchuniathon preserved in Eusebius, where the *casas*, *ignem*, and *pellis* of Lucretius 5.1011 are traced back to the gods Phlox, Pyr, and Phos and to their grandchildren Hypsouranos and Ousoos (*FGrH* 790F2, p. 808.2–14).

[4] Cf. the account of the origin of kingship analyzed below, pp. 90–93, and the parallels between it and Diodorus' account of the origin of animal worship (Chap. VI, note 20).

[5] Kremmer (91, note 1) calls attention to a number of notices in Pliny's catalogue and elsewhere which mention not only the invention but the state of affairs prior to it (e.g. *NH* 7.191: *Ceres frumentum invenit cum antea glande vescerentur*; 7.209: *tecta longa Thasii invenerunt*; *antea ex prora tantum et puppi pugnabatur*; and *FGrH* 70F5 [Ephorus], which traces a sequence in the development of different varieties of loom). Such passages suggest to Kremmer that heurematistic works may have contained, on occasion, *non modo nomina enumerata sed etiam narrationem contextam*. This may be so, though Thraede's analysis (1235–41) of the methods of "research" which have gone into the composition of surviving lists shows that most, at any rate, of the authors who belong to this tradition were concerned with the "traditionsbildende Geltung bestimmer Namen, nicht um die Weitergabe wissenschaftlich gemeinter Erkenntnisse" (*RhM* 105.186).

[6] Pliny's example is instructive. The order in which he arranges his *heurêmata* is as follows: (1) divine inventors, (2) writing, (3) architecture, (4) clothing, (5) medicine, (6) metallurgy, (7) agriculture, (8) government, (9) warfare, (10) *mantikê*, (11) music, (12) literature, (13) games, (14) painting, (15) seafaring, (16) animal sacrifices. Certain parallels with the order which lies behind our texts can be discerned here. (3) and (4) correspond to Stages 3A and B; (6), (7), and (9) to 5B, C, and E (with warfare following instead of preceding agriculture); and (11) through (14) to the arts of leisure (Stage 7). That there is some connection here is quite possible (see further Uxkull-Gyllenband, 45, with note 24, on the possible use of heurematistic sources by Posidonius). But Pliny's account is basically different from the ones with which we are concerned in that it lists under each heading the simplest as well as the most complex of inventions—the individual *heuretai* of historical times with the nameless and collective ones of prehistory.

connections with our tradition, they do not extend beyond scattered borrowings.[7]

In comparing this tradition with other ancient treatments of the development of technology one finds contrasts different in kind but no less significant than the ones just considered. The body of works surveyed in the Introduction contains many passages too fragmentary or allusive to provide a satisfactory basis for comparison. These may for present purposes be ignored, as well as those which offer what is essentially an enumeration of achievements rather than a connected analysis.[8] We are left with a dozen or so accounts that, like our texts, envision a gradual development of technology and assign a prominent role in this development to the workings of need and utility. But all of them are marked, either by a total absence of the particular historical methodology we are looking for, or else by a limitation of its use in favor of quite different procedures. Their number is not large; hence they may be profitably considered individually for points of similarity and contrast to our five texts.

The *Protagoras* myth. Protagoras, if Plato's account is to be credited, connected the growth of technology (*dêmiourgikê technê*) with the lack of any

[7] One or two obvious places where heurematists may have borrowed from our tradition should be noted here. "Sanchuniathon" (above, note 3) assigns to a certain Aion the discovery of the nourishment from trees by which men originally sustained themselves (*FGrH* 790F2, p. 807.21), and Pliny (*NH* 7.194) makes Toxius the discoverer of *lutei aedificii, exemplo sumpto ab hirundinum nidis* (cf. Democritus B154). A slightly more complicated transfer of material is evident in the following passages:

Hyginus 274.22	Cassiodorus, *Variae* 1.30.5	Pliny, *NH* 7.200
Afri et Aegyptii primum fustibus dimicaverunt. post a Belo . . . gladio belligeratum est unde bellum est dictum.	inter adversarios . . . non erant prius armata certamina, sed pugnis se quamlibet fervida lacessebat intentio. unde et pugna nomen accepit; postea Belus ferreum gladium primus produxit, a quo et bellum placuit nominari.	proelium Afri contra Aegyptos primum fecere fustibus.

This foolish bit of speculation could not have stood originally in a catalogue of inventors. It must have once been a general observation about the development of warfare (cf. Lucretius 5.1283–86) which occurred in an Egyptian context (cf. Diodorus 1.24.3, discussed above, p. 38, with note 22, and pp. 44–45). What appeared there as an indication of the first method of fighting used by the Egyptians against their neighbors (*Aegyptii primum . . . deinde . . .*) has become an assertion that the Egyptians were the first to fight in this fashion (in effect, *Aegyptii primi . . . deinde alii . . .*). The notice is of some use, since it gives added reason for linking Diodorus' account of the Egyptian Heracles (1.24.3) with the main body of his *Kulturgeschichte* and so with Lucretius 5.1440–43 (see above, pp. 44–45). For further instances where the heurematists may have borrowed from the tradition we are examining, see below, Chap. IV, note 15.

[8] As, for example, the first stasimon of Sophocles' *Antigone* and parts of the *Prometheus*. These texts, though they may reproduce speculation closely akin to that which lies behind our five texts, are in their present form mere catalogues.

natural means of protection against the forces of nature under which man, unlike other animals, labors. He also connected the formation of the social morality on which society rests (*politikê technê*) with a similar weakness in the face of the wild animals which threaten man's survival. The general picture of man's earliest mode of existence drawn in the myth recalls our texts,[9] as does its double focus on both technological and social development. And the reason for the formation of society which it gives is exactly the one which appears in Diodorus (4A). But Protagoras' presentation, though it has a historical setting, is basically analytic. The *politikê technê* and *dêmiourgikê technê* which men "acquire" in successive stages represent simply a convenient way of classifying those skills which men must have if the species is to survive;[10] there is no reason why the development of one should follow that of the other, as it does in Plato's account. The theological aspect of the myth, which makes *dêmiourgikê technê* and *politikê technê* the gifts, respectively, of Prometheus and Zeus to mankind, has often been suspected as a Platonic addition to the thought of the agnostic Protagoras.[11] If so, the original conception may have been that society and technology are survival mechanisms developed gradually by mankind to compensate for his physical inferiority to the other animals.[12] This suggestion, which puts the most naturalistic possible interpretation on the contents of the myth, perhaps overcompensates for suspected Platonic reworking.[13] But even if it is correct, Protagoras' account does not go beyond a vaguely conceived theory of challenge and response; of the more careful and detailed naturalistic reconstruction of history with which we are concerned there is no trace.

[9] In particular, the four necessities of life which form the subject of the sub-headings of Stage I are present in *Prot.* 321A–D. Summary versions of the list, or of portions of it, are, however, fairly frequent (cf. Plato, *Rep.* 2.369D; Cicero, *Tusc.* 1.62; Dio of Prusa 6.28; Pausanias 8.1.4–6; Origen, *Contra Cels.* 4.76; Themistius 323C; Nemesius, *Nat. hom.* 50–51 Matthaei). Here, as elsewhere, the parallels between the Protagoras myth and our texts do not extend beyond the commonplace.

[10] For this interpretation see Kleingünther, 105–6.

[11] See Havelock, 407–9, with the literature cited there.

[12] A teleological version of this idea appears in Origen's polemic against Celsus (see Cataudella, *RendIstLomb* 70.186–93). Celsus had evidently adduced the usual Academic and Epicurean (cf. Lucretius 5.195–234) argument against *pronoia* based on man's obvious weakness and unsuitability for survival. Origen replies (4.76) that such natural disabilities are a part of God's plan, in order to stimulate man to the mental activity and technological achievements which will make up for them (cf. Virgil, *Georgics* 1.121–46: Jove puts an end to the Golden Age *ut varias usus meditando extunderet artes*). A non-teleological version of the idea, though in connection with the development of a single *technê*, appears in *De vet. med.* 3: the art of medicine owes its origin to the fact that man was less well equipped than the other animals with sufficient *trophê*. His inability to live on the roots and grasses which sufficed for them led eventually to the scientific study of diet.

[13] The idea may simply be that man's *technê*, like the wings of the birds or the swift feet of the hare, is part of the *isonomia* of creation which insures survival to all species (cf. Herodotus 3.108; the teleological passages assembled by Dickermann, 69–71, in which *logos* or *docilitas* takes the place of the *technai* mentioned by Protagoras; and, for related ideas in the Presocratics, G. Vlastos, "Equality and Justice in Early Greek Cosmologies," *CP* 42 [1947] 156–78).

***Republic* II.** Socrates' account of the origin of the *polis* resembles our texts in distinguishing between "essential" and "non-essential" arts (the domains, respectively, of the simple and luxurious states), but Plato makes no effort to explain in historical terms how the division of labor between farmer, carpenter, weaver, and shoemaker, which he assumes to be the original one in human society, comes into being. The whole passage is analytic, lacking even the superficially historical approach of the Protagoras myth.

***Timaeus, Critias, Politicus;* Aristotle.** In a theory set forth with minor variation in three of his late works, Plato envisions the present inhabitants of the earth as descendants of the scattered survivors of a cataclysm which destroyed a previous civilization and necessitated a slow and laborious reacquisition of the needs of life.[14] Aristotle, to judge from a later Peripatetic account of prehistory which is usually believed to reproduce a theory that appeared first in the *De philosophia*,[15] followed Plato in his notion of recurrent cataclysms; he seems, however, to have been more interested than his master in tracing the different stages in the development of civilization. Beginning with a preoccupation with the necessities of life, men develop the fine arts, then the art of statecraft, then natural philosophy, and finally metaphysics.[16] Aristotle, with his distinction between the fine and useful arts, and both philosophers, with their notion of a laborious development of techniques to meet the difficulties inherent in man's natural condition, show points of contact with our texts. There is no detailed account of the development of the arts in the summary reports of Aristotle's account which survive, but it is conceivable that such an analysis did stand in the original text, reflecting, like the brief notices in Plato's late works, the content of discussions held in the Academy in the middle of the fourth century.

But Plato and Aristotle, even if they allow for an analysis of prehistory somewhat similar to what appears in Diodorus, Vitruvius, and Lucretius, combine this analysis with considerations of a completely different order.

[14] Cf. *Critias* 109B–110D, *Tim.* 22B–25D, *Pol.* 273A–74D.

[15] The account (pp. 75–77 Ross) is preserved in John Philoponus' commentary to the *Isagoge* of Nicomachus of Gerasa (1.8–2.42 Hoche) and in Asclepius' commentary on the *Metaphysics* (10.28–11.36 Hayduck); see A. J. Festugière, *La Révélation d'Hermès trismégiste* 2 (Paris 1949) 587–91, with the literature cited there. The attribution to Aristotle is disputed by L. Taran, *AJP* 87 (1966) 467–68.

[16] For an Academic treatment of the same theme, see *Epinomis* 974E–76C, which discusses the various achievements which at one time might have earned a man the title *sophos* but are no longer sufficient to do so. The classification of these achievements partly approximates the division into historical epochs given by Aristotle: 974E–75C, on arts leading to the acquisition of *anankaia*, is followed by 975D, on *paidia* (music, dancing, painting). And common to both authors is the notion that skill in devising techniques for survival is an early, but outmoded, form of *sophia*. See also below, pp. 103–4.

The phase of human history which witnesses the growth of technology is only part of a larger movement. For Plato it represents one phase of a cycle, the other of which is the age of the idealized Athens of the Atlantis myth or the wise and benevolent rule of *daimones* described in the *Politicus*—times when there was no need for the slow and laborious quest of necessities which characterized the beginning of the present era. Aristotle does not envision such periods of felicity, but he does see the growth of technology as a prelude to an obviously higher stage of development, where disinterested speculation on the nature of the universe and pure being occupies man's attention. The Platonic and Aristotelian conceptions are different, but they result in a similar downgrading of technology. Either it is largely irrelevant to the total scheme of things—an inadequate effort to recover that perfection of material well-being which belongs properly to another age and another order of existence;[17] or else it is a mere preparation for what is obviously to be man's true vocation.

It is hard to believe that such attitudes could ever give rise to an account of cultural origins centered, as those of Diodorus, Vitruvius, and Lucretius are, on an analysis of technology. The latter subject may be discussed, but only incidentally, by way of postscript to Utopia or Prolegomena to the History of Philosophy.[18] What the Platonic and Aristotelian attitude could and in fact eventually did give rise to, when combined with one similar to that found in our texts, is the *Kulturgeschichte* of Posidonius. The latter was obviously impressed both with the achievements of technology and with the attempts of certain thinkers to supply a naturalistic account of their origin. But as a teleologist he could not help viewing mastery of the useful arts as a subordinate and preparatory manifestation of man's genius. To accommodate both aspects of his thinking he found it necessary to modify the Aristotelian

[17] On this aspect of the *Politicus* myth, see Havelock, 43.

[18] Even such ideas on the subject as Aristotle and the Academy have may reflect the theories and work of their predecessors rather than their own. Behind the presentation of cultural development found both in the *Epinomis* and in Aristotle (cf., in addition to the passages cited above [note 15], *Met.* 1.981B13–22), there probably lies a polemic against those, Isocrates in particular, who condemn speculative philosophy as useless (see Einarson, *TAPA* 67.264–72, 282–84). The polemic, however, uses the ideas of these same opponents: their exclusion of philosophy from among the useful arts is accepted, as is their division of the latter into those which pertain to necessity and luxury (cf. Isocrates, *Paneg.* 40, *Bus.* 15). But philosophy, by virtue of its being sought for its own sake rather than for any extraneous utility or pleasure it may confer, represents a higher calling. Since it is good for nothing, it must be good in itself. If the classification of *technai* into which Aristotle introduces philosophy as a third and higher branch is taken over from his predecessors, so may be the history of civilization to which, in his view, the study of philosophy forms the final and culminating phase. (On the derivative character of Peripatetic and Academic *Kulturgeschichte*, see also below, pp. 104–5, and Sikes, *The Anthropology of the Greeks* 61–62, who notes the contrast between Democritus B154 and the suggestion in *HA* 9.612B18–21 that birds learned to build nests by imitating human dwellings. The latter passage may be a deliberate correction of the former.)

notion of technology as a prologue to philosophy. What had been a mere curtain-raiser now becomes Act One and receives the same cast of characters as the rest of the play. Only by this mode of procedure was it possible to justify a more extensive and more sympathetic treatment of the subject.[19] But the philosophers, as Seneca points out, sit very ill in their new roles.[20] The gulf between Aristotle's attitude toward technology and that of our five texts is nowhere more evident than in Posidonius' failure to effect a satisfactory compromise between them.

***Laws* III.** Here Plato keeps the cataclysm theory of the *Timaeus* and *Politicus* but introduces a new element. The period which follows the cataclysm is not one of complete deprivation; rather, men retain from the preceding world cycle just enough technology to satisfy their basic wants and at the same time not enough to involve them in the greed and contentiousness bred by the material goods of civilization. The further development of technology is in many ways a simple degeneration from a pastoral utopia rather than a response to sudden hardship. Obviously such a view of history is even less likely than the one just examined to result in a detailed analysis of the growth of the arts; and it removes altogether from the evolutionary perspective a large portion of the items covered in our texts. According to the thesis developed by Plato in *Laws* III, some technologies (among them weaving and pottery) are never lost to mankind, hence never need to be rediscovered.[21]

Dicaearchus. Like the Protagoras myth, Dicaearchus' schematization of prehistory (see above, p. 4) gives a treatment which is only superficially historical. The food gathering and pasturing of flocks which form the principal occupations of the earliest two eras described in the *Life of Greece* are part of an analytic scheme. They represent the exploitation, respectively, of the inanimate and animate resources which man has at his disposal and are actually so described by Dicaearchus.[22] His account made no attempt, so far

[19] Teleology and technology, rather than Hesiodic nostalgia and Ionian science (as suggested by W. Jaeger, *Nemesios von Emesa* [Berlin 1914] 124–25), seem to me to be the essential ingredients of the Posidonian compromise. The latter combination could have been achieved just as easily by the "hard" primitivism found in Dicaearchus and Tzetzes (see below, pp. 148–51).

[20] Cf. *Ep.* 90.11: *ista sagacitas . . . non sapientia invenit*; 90.21: improvements in agriculture continue to be made by *cultores agrorum*, not *sapientes*; 90.25: shorthand is the invention of *vilissima mancipia*.

[21] Plato's account, though offering no evidence for the widespread diffusion of the conception of technological progress present in our texts, is closely related, in another way, to the tradition they represent. See below, Chapter Seven.

[22] The origin of Dicaearchus' view is doubtless to be found in the Peripatetic conception of all things as existing for the sake of man (so Uxkull-Gyllenband, 36) and, in particular, in the passage of the *Politics* (1.1256A30–B7) which classifies the *bioi* of nomad, hunter, fisherman, and farmer.

as one can tell, to suggest why one stage should precede the other, or why two stages could not exist simultaneously. One might expect, for example, that the techniques of food producing would arise naturally out of those of food gathering; yet their appearance is, for some unspecified reason, delayed until the nomadic stage is over. The whole course of development seems to follow a preconceived pattern. Food gathering, pasturing, and agriculture succeed each other because each one represents a stage of development which is, in some sense, more advanced (or more degenerate)[23] than its predecessor. The logic which lies behind this scheme obviously has nothing to do with the effort to construct a continuum of individual discoveries which characterizes the five texts considered in Chapter Two.[24]

Theophrastus, *On Piety*. Theophrastus' attempt to describe the evolving forms of sacrifice practiced by man is a special application of some of the findings of *Kulturgeschichte*. The sequence of development he reconstructs is as follows: man's original food consisted of grasses, and the custom of offering first fruits prevailed then as now; hence the non-animal character of the earliest sacrifices. Later, famines led to cannibalism and, as a consequence, to the substitution of men for grass. Subsequently, the disadvantages of such a practice became apparent, so that animals were offered instead, and this practice has remained to the present time.[25] Like our five authors, though with rather less success, Theophrastus is seeking to give a continuous and plausible account of a gradual evolution. There is no attempt to fit the growth of sacrificial customs into any overall pattern involving progressive degeneration or refinement of *mores*. Theophrastus, however, deals with only a single one among the many *technai* of human life. There is no evidence to suggest

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Insofar, however, as Dicaearchus does not allow for the coexistence of different forms of *bioi* his presentation is even more abstract and schematic than Aristotle's.

[23] The character and extent of Dicaearchus' primitivism is debatable: see R. Hirzel, "*ΑΓΡΑΦΟΣ ΝΟΜΟΣ*," *AbhLeipzig* 20.1 (1903) 88, and Seeliger, "Weltalter," 409.

[24] None of the texts in our tradition treats the life of the herdsman, but it is instructive, for the sake of contrast, to suggest how such a treatment could have been accommodated in their general view of historical development. Man is nomadic to begin with, not because he keeps flocks, but because he himself moves in flocks like other animals (cf. 1A in Diodorus, Tzetzes, and Lucretius). In the course of foraging for food, primitive man would naturally find himself sharing his pasture with other animals; some of these he would naturally have to avoid; a few he might be able to kill and eat; with others he would continue to mingle until some accident suggested to him their potential usefulness. Domestication would follow by a gradual process and so, with very little change in the habits of either man or animals, the human flock would become itself a keeper of flocks. There is nothing of this in Dicaearchus, whose primitive man, rather in the manner of a Peripatetic philosopher, looks around him, classifies his environment into animal and vegetable, and proceeds to exploit, in systematic fashion, first one and then the other.

[25] Frs. 2, 4, and 13.15–50 Pötscher. See the analysis in Bernays, *Theophrastos' Schrift über Frömmigkeit* 118.

that he ever treated the subject in more comprehensive form.[26] Had he produced such a treatment, one would expect it to have embodied in some degree the analytic and teleological *schêmata* favored by his master.[27]

Diogenes of Oenoanda. Only when we turn from connected accounts to fragments—whose evidence, naturally, may be quite misleading—do we find, in two instances, clear parallels to our texts. A conception of the course of technological discovery identical with the one with which we are now concerned makes its appearance briefly in a fragment of the second century Epicurean Diogenes of Oenoanda (Fr. 11, col. I 1–II 11 Grilli). Diogenes tells how, from the wrappings of leaves or hides which provided the first clothing, men came gradually to the idea, first of felted, then of plaited garments, and finally to the invention of weaving. Evident here is the effort to establish a gradual sequence of discoveries, so that the idea for each advance is as easily and as naturally motivated as possible. The result is a continuity of development from the hides which appear under heading 3B of our texts to the woven cloth of 5D; and the plaited cloth which is intermediate in the development corresponds exactly to Lucretius' *nexilis vestis*.[28] The evidence of Diogenes suggests, then, that Lucretius was following Epicurean sources rather closely in his exposition in Book V.

Democritus. Of a somewhat different character, though just as close, are the parallels between our texts and certain fragments of Democritus. Most of these parallels have been pointed out and discussed by other scholars.[29] Hence a summary enumeration of them will be sufficient here. Something very similar to the inventive process as conceived by our texts is present in the fragment (A151) which suggests an explanation for the origin of the custom of breeding mules: a chance mating of mare and jackass was once observed by a man who proceeded to "take instruction" from this and to develop the custom of raising mules. The later traditions which credit

[26] Theophrastus is said to have composed a *Peri heurêmatôn* (see above, p. 5), and hence it is sometimes supposed that he concerned himself extensively with *Kulturgeschichte* (see E. Zeller, "Über die Lehre des Aristoteles von der Ewigkeit der Welt," *AbhBerlin* 1878, 107–8; Dyroff, *Zur Quellenfrage bei Lukrez*, 14–15; but on the character of such works, see above, pp. 49–50.

[27] Though Theophrastus voiced doubts about details of the teleological analysis of nature, he never considered dispensing with the system altogether (O. Regenbogen, *RE* Suppl. 7 [1940] 1472–76, s.v. "Theophrastos"). Such an innovation did come with Theophrastus' successor Strato, who also wrote a *Peri heurêmatôn*; but the latter work seems to have been chiefly a polemic against Ephorus' treatment of the same subject.

[28] Also worth comparing with the doctrines of our texts is Diogenes' statement that all arts came into being through *αἱ χρεῖαι καὶ περιπτώσεις μετὰ τοῦ χρόνου* (Fr. 11, col. II 9–11); *περιπτώσεις* (=encounters and so, perhaps, accidents) may be a reference to the specific situations which figure so prominently in our tradition.

[29] Notably Reinhardt, *passim* (cf. also his *Poseidonios*, 392–408); Uxkull-Gyllenband, 25–34, 44–46; and Vlastos, *AJP* 67.51–59, *PhilRev* 55.54, note 7.

Democritus with the invention of the arch (B300.14)[30] or tell how he commended Protagoras' invention of the porter's carrying strap (Gellius, *Noct. Att.* 5.3.1–6)[31] need not be credited, but they do suggest that technology was one of the major interests revealed in his writings. And the subject of Stage 5 in Table 1—the technologies which arise from the discovery of fire—suggests the Democritean title (B11e) *Αἰτίαι περὶ πυρὸς καὶ τῶν ἐν πυρί*.[32] The distinction between the useful and fine arts common to Democritus and Vitruvius has already been noted (above, p. 43). The explanations of the discovery of houses and music found in Vitruvius (3A) and Lucretius (7C) appear in Democritus (B154), along with a parallel suggestion as to the origin of weaving (originally an imitation of the spider's web). Democritus made Musaeus the inventor of the hexameter (B16); and this suggests that Democritus, like the source followed by Lucretius (8B), was concerned with the origin of poetry and assigned it to a time slightly before the Trojan War.[33] For Democritus, as well as for our texts, new ideas originate in a small portion of the population (though not, presumably, the same portion always), then spread through a social medium; such, at any rate, seems to be the implication of the famous fragment on the "few among the ones with skill in speech"

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[30] The source is Posidonius (preserved in Seneca, *Ep.* 90.32). The passage is incorrectly printed by Diels along with Seneca's own comment mentioning another tradition relating to Democritus (90.33: *excidit porro vobis* ["the further fact has escaped your notice"] *eundem Democritum invenisse quemadmodum . . . calculus in smaragdum converteretur*). The attribution of the discovery of artificial emeralds is probably based on the pseudo-Democritea of Bolus (see Diels, *ad loc.*). The story about the arch, coming from a different source and having nothing alchemical about it, is part of a separate and perhaps more authentic tradition. It may indicate that architecture was one of the subjects treated by Democritus in his writings—whence, perhaps, his utilization by Vitruvius (cf. the latter's reference, 7, *Pr.* 11 = *VS* 59A39, to a work of Democritus on architectural perspective). It is worth noting that the *Kulturgeschichte* of Vitruvius II is introduced as a digression in a passage which analyzes the qualities of various building materials in terms of the atomic *principia* through whose *congressus* they come into being; and Democritus is explicitly mentioned in this discussion (2.2.1) as the author of the theory which lies at the basis of the analysis.

[31] Gellius gives the fullest version of a story which is at least as early as Epicurus (172 Usener).

[32] Suggested as the ultimate source for Lucretius 5.1090 ff. by Ernout-Robin, *ad loc.* The work, like the other books of *Aitiai* attributed to Democritus, was not included in Thrasyllus' tetralogies, and it is accordingly regarded as spurious by Nietzsche, Rohde, and Diels (cf. *VS*, note on II 91.12); see, however, H. Diller, "Wanderarzt und Aitiologe," *Philologus* Suppl. 26.3 (1934) 43–46, who argues that these aetiological writings are "wenn nicht von Demokrit selbst, so doch sicher aus dem abderitischen Schule."

[33] Cf. Diodorus, 4.25.1, who makes Musaeus a contemporary of Heracles. Since Musaeus is hardly separable from Orpheus, it is worth noting that Linus, the inventor of music and teacher of Orpheus, Heracles, and Thamyras, appears along with Cadmus, the inventor of letters, in Diodorus 3.67.1–2 (from Dionysius Scytobrachion; cf. *FGrH* 32F7, p. 239.21–29). Since epic is here represented in the person of Thamyras, the collocation of subjects (music, letters, poetry) is exactly that of the closing portions of Lucretius V; and the mention of Heracles recalls the corresponding passage in Diodorus (8A: see above, pp. 44–45).

(B30),[34] who are responsible for making Zeus worshipped as king of the sky.[35]

Finally, both the accidental and empirical character of the inventive process and the collective character of human achievement are referred to in a notice preserved in an Arabic translation of Galen: "We find that of the bulk of mankind each individual by making use of his frequent observations gains knowledge not attained by another; for as Democritus says, experience and vicissitudes have taught men this, and it is from their wealth of experience that men have learned to perform the things they do" (*VS* II 423.17–22). And the same idea can perhaps be traced in another fragment (B158) which tells how "mankind, thinking new thoughts with the coming of each day, drawn on by their impulse toward one another (*τῇ πρὸς ἀλλήλους ὁρμῇ*) as if by a cord drawn taut, proceed, some from one place, some from another, to their undertakings."[36] Though the phraseology distantly recalls Empedocles,[37] the *hormê* of which Democritus speaks is probably more inclusive, less uniformly benevolent than *philotês*: it brings, not ultimate rest and unity, but diversity and activity. Perhaps we should see in the simile of the taut cord a reference to all the modes of interdependence which exist within human society. Motion at one end of such a cord always means some sort of response at the other; the stronger and more numerous the *artêmata*, the less each man is left to his own devices. Hence the new thoughts which come into being with each day, the diverse sources from which the stream of human activity is fed. The idea is quite similar to one which appears in

[34] The translation of *logioi* given in the text is that of Havelock (412) and Pfligersdorfer (*WS* 61/62.9–19), followed by A. Battegazzore, "Influssi e polemiche nel fr. (D.K.) 25 di Crizia," *Dioniso* 21 (1958) 46–47. Reinhardt, 511, sees in the *logioi* "die wenigen überlegenen Geister die zu allen höheren Errungenschaften der Masse vorschreiten"—an interpretation accepted by E. Norden, *Agnostos Theos* (Leipzig 1913) 397–98, who compares the *πυκνός τις καὶ σοφὸς ἀνήρ* in Critias' *Sisyphus* fragment (*VS* 88B25.12). Similarly, W. Jaeger, *The Theology of the Early Greek Philosophers* (Oxford 1947) 183–84, considers the *logioi* a projection into primitive times of the figure of the Ionian philosopher, and Nock, *JRS* 49.7, compares a number of passages in later literature on the nearness to the gods of primitive man and suggests that the *logioi* are individuals gifted with some sort of special perception. But the early usages of the word cited by Havelock and Pfligersdorfer suggest that the only powers separating the *logioi* from their fellows are those of verbalization. See also Appendix IV.

[35] Cf., in a later scene of "apotheosis," Livy 1.16.3: "deinde a paucis initio facto, deum deo natum, regem parentemque urbis Romanae salvere universi Romulum iubent"; and, in a more general context, Strabo 2.103, who alleges, in opposition to Posidonius' theories of geographical determination, that racial and linguistic differences arise *κατὰ ἐπίπτωσιν καὶ συντυχίαν*. Similarly, *τέχναι τε καὶ δυνάμεις καὶ ἐπιτηδεύσεις ἀρξάντων τινῶν κρατοῦσιν αἱ πλείους ἐν ὁποιῳοῦν κλίματι.*

[36] Plutarch, who preserves the fragment (*Lat. viv.* 5.1129E), cites elsewhere the single phrase *νέα ἐφ' ἡμέρῃ φρονέοντες ἄνθρωποι* (*Quaest. conv.* 3.6.655D, 8.3.722D), which is the only unquestionably Democritean part of the passage given in the text. But the echoes of Empedocles (see following note) and the strongly materialistic cast of the thought suggest that the citation extends further.

[37] Cf. *VS* 31B35.5–10, on the *φιλότητος ὁρμή* under whose influence *πάντα συνέρχεται ἓν μόνον εἶναι . . . συνιστάμεν' ἄλλοθεν ἄλλα.*

Vitruvius (36.8–12—see above, pp. 39–40); only here it is a *varietas artêmatôn* rather than a *varietas artium* which gives rise to *maiores cogitationes.*

The parallels are exact and extensive, and they take on further significance when viewed against the negative results of the rest of our comparative investigation. It is fairly clear that the hypothesis of a single source for our five texts is correct. Though certain affinities to their doctrines can be traced over a large body of material, our survey has only served to throw into sharp relief the essential uniqueness of those doctrines taken in their entirety. They seem to preserve, even in the summary form in which we have them, the still fresh imprint of a powerful and creative intelligence, one whose thought was evidently too individual and subtle to be widely assimilated, however many the places where faint echoes of it remain. And at this point one may well wonder whether earlier investigators, inadequate method notwithstanding, were not right in assuming that this intelligence was Democritus'.

The identification cannot be regarded as certain. There is no connected account of Democritean *Kulturgeschichte* comparable to those we possess for most of the authors examined in this chapter; if there were, it might be clear that Democritus is as far removed as Plato, Aristotle, or Dicaearchus from the tradition preserved in our five texts. Moreover, the very fidelity with which Lucretius, Diodorus, Vitruvius, and Posidonius preserve the doctrines they reproduce might argue for a source less remote in time—Epicurus, perhaps, whose writings were kept alive in the first century B.C. in a way those of Democritus were not,[38] or some Hellenistic writer whose name is not remembered in connection with *Kulturgeschichte* at all.

A final answer to the question may not be possible; it must await, at any rate, a more extensive study of the tradition embodied in our texts. The passages considered thus far have been concerned largely with technology or with the development of society insofar as it has an effect on technology. The possibility that the theory they reproduce gave independent and detailed consideration to language, society, and social norms has not been considered. Yet it is obvious from the passages cited above under Stage 4B (p. 33) that language, at least, received some such consideration. How significant a part this and related discussions played it will be the task of the next three chapters to determine. The investigation will be revealing in itself, since this is the aspect of ancient *Kulturgeschichte* which has been least studied; and it will bring as an incidental result a better clue than any we now possess to the identity of the source upon whom the five authors studied in Chapters One and Two have drawn.

[38] Recognition of an Epicurean source for our tradition would not, of course, preclude the possibility of extensive Epicurean borrowings from Democritus.

CHAPTER FOUR

THE ORIGIN OF LANGUAGE (DIODORUS, VITRUVIUS, EPICURUS)

Vitruvius, Diodorus, and Lucretius include references to the origin of society and language at almost exactly corresponding points in their narratives (see above, p. 33). Language receives, in all three instances, a more extended treatment than society; hence it is here that a study of the non-technological portions of our tradition is best begun.

VITRUVIUS 33.24–28	DIODORUS 1.8.2–3
in eo hominum congressu [the first human aggregation]	. . . ἀθροιζομένους δὲ . . . ἐπιγινώσκειν ἐκ τοῦ κατὰ μικρὸν τοὺς ἀλλήλων τύπους
(A) cum profundebantur aliter e spiritu voces	(A) τῆς φωνῆς δ' ἀσήμου καὶ συγκεχυμένης οὔσης
(B) quotidiana consuetudine vocabula ut obtigerant constituerunt;	(B) ἐκ τοῦ κατ' ὀλίγον διαρθροῦν τὰς λέξεις
(C) deinde significando res saepius in usu	(C) καὶ πρὸς ἀλλήλους τιθέντας σύμβολα περὶ ἑκάστου τῶν ὑποκειμένων
(C[1]) ex eventu fari fortuito coeperunt	
(D) et ita sermones inter se procreaverunt.	(D) γνώριμον σφίσιν αὐτοῖς ποιῆσαι τὴν περὶ ἁπάντων ἑρμηνείαν.

LUCRETIUS 5.1028–29

at varios linguae sonitus natura subegit
mittere et utilitas expressit nomina rerum.

Diodorus distinguishes four, and Vitruvius five, stages in the development of language. Their accounts, except for the additional stage in Vitruvius, are closely parallel. The first uttering of confused sounds (A) is followed by the articulation of these sounds into words (B);[1] then a convention arises by

[1] *Cotidiana consuetudine* in Vitruvius' version of this stage might seem to suggest communication among men, but this does not come until Stage C[1]: *deinde . . . fari coeperunt* (cf. the definition in Varro, *LL* 6.52: *fatur is qui primum homo significabilem ore mittit vocem*). What Vitruvius must be referring to is a period during which, by chattering to themselves, men gradually form the habit of uttering recognizable patterns of sound (*vocabula*), rather than mere grunts and cries. They are no longer dumb or inarticulate, though still *infantes*. The later appearance of the phrase *fari coeperunt*, the comparison with Diodorus, and the passages cited below in note 2—all of which make the second stage in the development of language one in which words are articulated without being given meanings—demand that we take *vocabula* in Vitruvius to mean words that have not yet been assigned meanings. Elsewhere in Latin a *vocabulum* is always that by which a thing is called, its appellation or name; but Vitruvius could have been led to this peculiar usage either through imperfect under-

which certain words come to designate certain objects (C);[2] and eventually a whole language is created (D). A is the only one of these stages which is clearly paralleled in Lucretius, who, in a lengthy passage here omitted (5.1030–90), attempts to show that men, like animals, can be expected to express their varying sensations and emotions with correspondingly varied natural cries, the *varios sonitus* of 1028. The phrase *utilitas expressit nomina rerum* presumably refers to a later stage in the process, the exact character of which is left unclear.[3] But however Lucretius conceived the workings of *utilitas* in the realm of language, it is most unlikely that they corresponded to anything found in Stages B, C, and D. The Epicurean theory of language is known to us from other sources and is, as we shall see, quite different from that of Diodorus and Vitruvius.

Although phases A and B in Diodorus and Vitruvius may be considered "natural" ones, the account, taken as a whole, appeals to *thesis* rather than *physis* for its explanation of language. For as soon as it becomes a form of communication (in C) language is viewed as the product of nothing more than agreement. This can be seen from the phrases *sermones inter se procreaverunt* and *πρὸς ἀλλήλους τιθέντας σύμβολα*, in which the idea of mutual acceptance is clearly present. For Epicurus, however, language is largely a "natural" phenomenon, and Lucretius, though his account is less complete, follows him quite closely. Names were not at first deliberately given to

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standing of a Greek original or through the exigencies of Latin, which in his day may not have possessed a single accurate equivalent for *lexis*: *locutio*, the term used by Boethius (*Herm. Sec.*, p. 5.5–10 Meiser), is first attested in the required sense in Quintilian (1.5.2).

[2] These first three stages are also present in Cicero, *Rep.* 3.3, which speaks of a process which *voces incohatum et confusum sonantes* (A) *incidit et distinxit in partes* (B) *et ut signa quaedam sic verba rebus impressit* (C); and in Horace, *Sat.* 1.3.103–4: *donec verba quibus voces sensusque notarent | nominaque invenere.* The "marking" of *voces* is Stage B, that of *sensus*, Stage C; earlier (3.100) Horace had spoken of man as a *mutum* ("inarticulate," not "mute": cf. Lucretius 5.1088) *pecus* (Stage A). Cf. also Plato, *Prot.* 322A: *φωνὴν* (B) *καὶ ὀνόματα* (C) *ταχὺ διηρθρώσατο*; and Euripides, *Suppl.* 203–4 (in a passage devoted to *Kulturgeschichte*): *ἄγγελον γλῶσσαν λόγων . . . ὥστε γιγνώσκειν ὅπα* (cf. *voces notare*).

[3] The meaning is, I suggest, that whereas nature compelled men to associate certain sounds with certain objects, the idea of using these sounds for communication came only when men perceived that their utterances were understood by others—i.e. useful (cf. 1046–48: *si non alii quoque vocibus usi | inter se fuerant unde insita notities est | utilitatis*). Once this happened, men would continue to utter the sounds which objects naturally suggested, but with the expectation now of being understood. It is only at this stage that *voces* become *nomina*. If this interpretation is correct, it is wrong to attribute to Epicurus the view that "die ersten erdentsprossenen Menschen bedienen sich bereits der *onomata* und der *rhêmata*, besitzen also schon eine artikulierte Sprache" (Spoerri, 137). Language comes into being by a process, though it is a natural and almost automatic one. For other interpretations of *utilitas expressit nomina rerum*, see Dahlmann, 16–17, and Vlastos, *AJP* 67.55, note 20. Whatever we take to be the meaning, Dahlmann is certainly right in rejecting C. Giussani's effort (*Studi Lucreziani* [Turin 1896] 280) to find here a trace of the second, conventional phase in the growth of language to which Epicurus refers in *Ad Herod.* 75–76.

things; rather, "men's natures according to their different nationalities had their own peculiar feelings and received their peculiar impressions, and so each in their own way emitted air formed into shape by each of these feelings and impressions, according to the differences produced in the different nations by their place of abode as well" (*Ad Herod.* 75). Only later do men introduce certain names through common consent in order to "make their meanings less ambiguous to one another and more briefly demonstrated." The exact character of language in the initial stage is not completely clear. Evidently, however, the inhabitants of a given region would automatically associate certain sounds with certain objects or emotions—words with a high proportion of liquid sounds with bodies of water, let us say, or heavy consonant clusters with feelings of anger. This being so, it would be possible for a man to tell, in a general way, what his neighbor was saying to him; but to avoid ambiguity and long explanations the natural vocabulary would have to be supplemented by a conventional one. In a passage whose meaning is even more uncertain (*Ad Herod.* 76), Epicurus goes on to suggest that an analogous process would take place even with regard to certain οὐ συνορώμενα πράγματα (presumably non-sensible entities like abstractions or relationships). Those who perceived such things directly (τοὺς συνειδότας) would be constrained automatically to utter certain sounds in connection with them; while others (subsequently, perhaps) "taking rational cognizance" of such entities (τῷ λογισμῷ ἑλομένους) would supply "interpretation" in accordance with τὴν πλείστην αἰτίαν.[4]

The whole theory is an unusual one, and we do not possess the evidence required for reconstructing it in its entirety. But concerning its general outlines and its canonical position in Epicurean thought there can be little doubt.[5] Obviously, it has little or nothing in common with the doctrine set forth in Diodorus and Vitruvius.[6] Of the two theories, it is rather hard to determine, simply on the basis of the passages considered thus far, which, if either, should be considered an integral part of the tradition of cultural history with which we are concerned. The Epicurean theory goes far toward removing the phenomenon of language from an evolutionary perspective; hence, like the conception found in Posidonius of a social order coeval with man himself (see above, pp. 35–36), it ought perhaps to be regarded as a modification of the main line of thought evident in our tradition. On the

[4] Cf. Dahlmann, 10–11; see below, pp. 72–74, and Chap. V, note 15.

[5] The discussions of Giussani [above, note 3] 275–80), C. Bailey (*The Greek Atomists and Epicurus* [Oxford 1928] 267–68) and P. H. and E. A. DeLacy (*Philodemus: On Methods of Inference* [Philadelphia 1941] 140) overestimate the importance of the conventional stage in the theory; see Vlastos, *AJP* 67.54, note 16, and Spoerri, 136, note 5.

[6] The inconsistency of Diodorus 1.8.3–4 with Epicurean linguistic theory was first noted by Dahlmann, 40–41; see, further, Vlastos, *AJP* 67.53–55, and Spoerri, 134–41.

other hand, the position of Diodorus and Vitruvius recalls in some ways the widely held view which traced language to an original *thesis*, whether of a single *nomothetês* or of the "men of old" acting as a body.[7] It reveals little if any trace of what was shown in Chapter Three to be the characteristic feature of our tradition: the preoccupation with establishing a close causal sequence of individual historical events. It is conceivable, then, that language did not receive the same careful consideration in our tradition as did technology, or that, if it did, no clear trace of such a treatment has survived.

There is, however, one item in the passages quoted at the beginning of this chapter which, properly interpreted, may lead to a different conclusion. As has been noted, Vitruvius' account of the origin of language contains one more stage than does that of Diodorus. Between C (*significando res saepius in usu*) and D (*sermones inter se procreaverunt*) there is the phrase: *ex eventu fari fortuito coeperunt* (C[1]). The phrase might be interpreted simply as an effort to emphasize the chance character of the particular set of symbols hit upon, but *eventu fortuito* ought to refer to a single chance event, not to the whole series of chance associations between sound and meaning which would determine the character of the language. The position of the line is also strange: one would expect the notice about the beginnings of speech (C[1]) to precede rather than follow C (*significando res saepius in usu*). Is it possible that C refers, not to linguistic communication, but to sign language?[8] The meaning would then be that, in the course of pointing out to each other the things of which they had need, men hit upon the idea of using words (already articulated, but not assigned meanings, in B)[9] to express their wants. And the *eventus fortuitus* through which this occurred may have been the sort of chance event with which we are familiar from the discussion of Chapter One.

If this interpretation is correct, Diodorus has omitted a passage in his source describing the first appearance of language and interpreted the general statement about *symbola* which appears in C as referring specifically to verbal communication. It is perhaps significant that in C neither Vitruvius nor Diodorus uses terminology which must apply exclusively to language: *symbola* rather than *onomata*, and *significando* rather than *nomina imprimendo*. And elsewhere both Lucretius (5.1022) and Vitruvius (33.22—see above, p. 15) mention the use of gestures for communication before they describe the beginnings of language.

[7] See Spoerri, 138–39, and D. Fehling, *RhM* 108.219–26, who rightly emphasizes that the view of language in question is essentially "die dem Mythos näher stehende vom *heuretes*," and so very different from "die mehr wissenschaftliche der Kulturentstehungslehren" (219).

[8] With Vitruvius' *significando res saepius in usu*, compare Agatharchides *ap.* Diodorus 3.18.6 (on the Ichthyophagoi): διαλέκτῳ μὴ χρῆσθαι, μιμητικῇ δὲ δηλώσει διὰ τῶν χειρῶν διασημαίνειν ἕκαστα τῶν πρὸς τὴν χρεῖαν ἀνηκόντων (cf. Photius 450B10–11: μιμητικῇ δηλώσει διοικεῖν πάντα τὰ πρὸς τὸν βίον).

[9] See above, note 1.

Support for our interpretation, as well as a confirmation of the suggestion regarding the nature of the *eventus fortuitus* mentioned in Vitruvius, comes from two passages, one in the Aegyptiaca of Diodorus, the other in Lactantius, both of which are closely related to the two under discussion:[10]

> When men were in the process of aggregating and abandoning their animal-like way of life, they at first fought and ate one another, the stronger always overpowering the weaker. Afterward, however, the weaker ones were taught by expedience (*sympheron*) to band together and make their identifying emblem (*sémeion*) a representation of one of the animals which they subsequently deified. All those who were at any time in fear for their lives would assemble by the emblem, thus forming a group which could give an attacker pause. The practice spread, so that the human multitudes became organized into groups (*systêmata*) each one of which regarded the animal which had been its salvation as the greatest of benefactors and conferred on it divine honors. On account of this the separate Egyptian tribes (*ethnê*) down to the present day honor the animal which received divine honors among them at the outset. (Diodorus 1.90.1)

> [Primitive men] bestiis et fortioribus animalibus praedae fuisse commemorant, tum eos qui aut laniati effugerant aut laniatos proximi viderant, admonitos periculi . . . ad alios homines decucurrisse et primo nutibus voluntatem suam significasse, deinde sermonis initia temptasse ac singulis quibusque rebus nomina imprimendo paulatim loquendi perfecisse rationem. (Lactantius, *Inst. div.* 6.10.13–14)

The course of evolution described in Lactantius is exactly that which appears in Diodorus 1.8: men's weakness relative to the beasts leads to aggregations in which speech is developed. And the sequence of gestures followed by speech which has been suggested for C and C[1] in Vitruvius exactly parallels the *primo nutibus . . . deinde sermonis initia* of Lactantius.

The Diodorus passage comes from an account of the origin of animal worship in Egypt and is interesting in itself for its anticipation of a totemistic theory of the origin of religion.[11] The process described is, however, so closely analogous to the formation of societies which is the subject of Diodorus 1.8 (see Stage 4A–B, above, p. 33) that the two passages cannot have arisen independently. Men band together for self-protection (with *sympheron* here, compare *hypo tou sympherontos didaskomenous* in 4A); they then develop a means of communicating with one another (language in 4B, the emblem here); and the *systêmata* thus formed develop eventually into tribes:

[10] The relevance of Diodorus 1.90 was first noted by Uxkull-Gyllenband (27, with note 15), that of Lactantius by Spoerri (156–58; see also his article in *MusHelv* 18.79, note 83). The identity of Lactantius' source is not known (Spoerri, 158, note 8); it may, however, be Cicero.

[11] Cf. Menzel, *SBWien* 216, No. 1, 167; T. Hopfner, *Plutarch über Isis und Osiris* 2 (Prague 1941) 265; H. Bonnet, *Reallexikon der ägyptischen Religionsgeschichte* (Berlin 1952) 822, col. 2, s.v. "Tierkult."

Diodorus notes, in the passage (1.8.4) immediately following the one printed as Stage 4B, that the original *systêmata* are the first parents of the various *ethnê* of the world—just as the *systêmata* of 1.90 are the ancestors of the different *ethnê* of Egypt. The variation in such similar passages between references to linguistic and non-linguistic methods of communication suggests the use of a source which, like Lactantius, mentioned or allowed for both.[12] And the same may be said of the contrast between the human aggressors of 1.90 and the animal ones of 1.8. The text of Lactantius as it now stands mentions only the latter. But it is strange that he should distinguish between *bestiis* and *fortioribus animalibus*. *Animalibus* is surely a gloss introduced by someone who was unable or unwilling to understand the sinister implications of *fortioribus*. The original idea is preserved in a fragment of Cicero's Epicurean contemporary Lucius Saufeius which explains *Latium* as the name given the place where primitive men *latuerunt . . . caventes sibi a feris beluis vel a valentioribus* (Servius *ad Aen.* 1.6).[13]

Both Diodorus (1.90.1) and Lactantius describe a situation which may well be the *eventus fortuitus* referred to in Vitruvius. New forms of communication, linguistic or non-linguistic, arise in a moment of crisis. Their initial application may be something of an accident: the *sermonis initia* of Lactantius are hardly more than a cry of terror uttered without knowledge of what its effect will be. The subsequent development is not clearly described by Lactantius, but Diodorus' text suggests that development would take place to the degree that the new mode of communication proved itself useful. If the cry uttered succeeded in saving the utterer and in warning those whose

[12] This suggestion is also the one which best accounts for the "totemistic" theory of 1.90. Uxkull-Gyllenband, 27 with note 15, assumed that the author on whom Diodorus has drawn simply transferred, rather crudely, "die Theorie wonach Verbände durch eine Sprache begrundet werden auf die Verehrung eines Tieres . . . die nun ihrerseits eine Gruppe entstehen lässt." Actually, the process seems to have been more complicated. The emblems of 1.90 were not invented by Diodorus' source. The names of the various nomes of ancient Egypt are often written in hieroglyphics as insignia (many of them representations of an animal which was the object of a local cult) resting atop a standard and perch (see K. H. Sethe, "Urgeschichte und älteste Religion der Ägypter," *Abh. für die Kunde des Morgenlandes*, 18.4 [1930] 33–34). Presumably such standards were at one time in actual use, and Diodorus' source must have been aware of their existence. In supposing them to have been intimately connected with the origin of animal worship, he was evidently following the same line of reasoning which has led certain modern scholars to a similar conclusion (see A. Moret, *The Nile and Egyptian Civilization* [Eng. transl. New York 1927] 38–53; A. Moret and G. Davy, *From Tribe to Empire* [Eng. transl. New York 1926] 122–24). What is involved is not mere speculation but an application of speculative ethnology to observed data. And the application would have suggested itself more easily if the particular piece of ethnology used embodied, not simply a recognition of the importance of language as a *vinculum societatis*, but a more general consideration of the importance of tangible symbols of tribal identity in the early phases of social development.

[13] Cf. also Isidore, *Orig.* 15.2.5–6: *primum homines . . . nec contra beluas praesidia habebant . . . nec ipsi inter se homines ab hominibus satis erant tuti*—in a passage which, like its counterpart in Lactantius, is devoted to describing the origin of *oppida*.

assistance he received of impending danger, it would naturally, like the emblem in Diodorus, be used again in similar situations. Men would utter it with the expectation of its bringing aid, and those who heard it would respond by assembling to the point from which it came. The nucleus of the *systêma* would thus be those who gathered to a common emblem or rallying cry, or to a hand signal or beacon fire—whence, perhaps, the role played by fire in Vitruvius' account of the origins of society.[14] There is no reason why the theory should not have envisioned the possibility of a variety of *symbola*:[15] whichever type first proved itself useful would continue to be employed. Eventually, however, the superiority of verbal to non-verbal communication

[14] For fire signals as a summons to common defense in historical times, cf. Theognis 549–50, and Demosthenes, *Cor.* 169. Gorgias (*VS* 82B11a30) includes them among the *heurêmata* of Palamedes, who is credited by Pliny with the more general *signi dationem* (*NH* 7.202).

[15] It is just possible that this is the idea behind an obscure passage in Hyginus (274.20–21) on the origin of the trumpet:

> Tyrrhenus Herculis filius tubam primus invenit hac ratione, quod cum carne humana comites eius vescerentur, ob crudelitatem incolae circa regionem diffugerunt; tunc ille quia ex eorum decesserat, concha pertusa buccinavit et pagum convocavit. testatique sunt se mortuum sepulturae dare nec consumere. unde tuba Tyrrhenum melos dicitur. quod exemplum hodie Romani servant et cum aliquis decessit tubicines cantant et amici convocantur testandi gratia eum neque veneno neque ferro interiisse.

Quia ex eorum decesserat makes no sense. Kremmer (76–77) suggests *quia aliquis ex eorum numero decesserat* —which, however, leaves the transition from cannibalism to non-cannibalism unexplained. Rose (*ad loc.*) suggests that Tyrrhenus' companions were only thought to be cannibals by the surrounding *incolae*. But why, then, should the latter answer what could only seem a summons to their own destruction? Perhaps *ex eorum decesserat* mistranslates an ἐξ αὐτῶν ἀπῆλθε in which the subject was Tyrrhenus rather than some unnamed companion, and in which the verb meant simply "depart." Tyrrhenus abandons the ways of his companions and summons the *pagus* to a common defense against them with a *concha pertusa*. The alliance thus formed would have included, first, a pact against cannibalism, then the agreement to bury the dead which our text preserves (cf. Moschion, Fr. 6.32–33 [*TGF* 814] where, upon abandoning cannibalism, men make it their custom to bury their dead μηδ' ἐν ὀφθαλμοῖς ἐὰν τῆς πρόσθε θοινῆς μνημόνευμα δυσσεβοῦς; and, for burial as a *heurêma*, Diodorus 5.69.5). The text as it now stands would thus be the result of modifications transforming a Greek aetiology of the use of the Etruscan trumpet as a call to battle (cf. Aeschylus, *Eum.* 567; Euripides, *Phoen.* 1377; Sophocles, *Ajax* 17; *Anth. Pal.* 6.151) into an explanation of the Roman custom of using it at funerals. *Decesserat* has taken on a new meaning to suit this context, and the original connection between burial and the abandoning of cannibalism has been obscured. Cf. Pliny, *NH* 7.201, who attributes to Tyrrhenus' son Pisaeus the invention of *aeneam tubam* (perhaps an improvement on his father's *concha pertusa*), and Juvenal 15.142–59 on the institution of society, which has removed mankind *vetusto de nemore* (151–52) and taught them (155–58):

> protegere armis
> lapsum aut ingenti nutantem vulnere civem,
> communi dare signa tuba, defendier isdem
> turribus atque una portarum clave teneri.

Here the *tuba* as a means of common defense appears in close connection with a situation (*protegere . . . civem*) which strongly recalls the one described in Lactantius. If our interpretation of Hyginus is correct, the *concha pertusa* may have been another *symbolon* for which the tradition represented in Diodorus and Vitruvius envisioned a role in the early history of society.

for most purposes would insure it a more extensive development; new uses for speech would suggest themselves and, eventually, a language arise.

This conception supposes a much closer connection between the formation of language and the formation of society than could be inferred from the texts printed under headings 4A–B in Chapter Two.[16] Language is not merely something which society makes possible. From the very beginning it symbolizes the benefits of cooperation and mutual defense and directs men to them. It is thus the essential medium for the whole process by which men go about securing these advantages. But the conception, even if it is not present in the passages considered in Chapter Two, is so closely related to the view of the growth of technology which they embody that it is hard to believe it did not once form part of a single account with that view. The impetus for the development of language, as for that of technology, is an *eventus fortuitus*: a new mode of communication tried as a last resort in a crisis succeeds in warning enough people so that a successful defense is possible; and once the utility of language is thus established, it will become habitual, like a newly discovered technique. New uses for speech, like new techniques, will constantly suggest themselves and become assimilated through imitation and exchange in a social medium. And the whole conception, linking the two developments of language and society, serves to make both follow more plausibly from what precedes: the sequence of discrete events which is being constructed approaches a step closer to the ideal of a historical continuum (see above, pp. 47–48).

If this is indeed the line of thought of which Vitruvius and Diodorus preserve a fragmentary record, an important new aspect of our tradition has been revealed. The discovery, significant in itself, has some bearing on the problem of sources. Vitruvius and Diodorus do not derive their theory of the origin of language from Epicurus; and their theory is so closely similar to its counterparts on technology that it must go back, along with them, to a common source. Clearly, then, this common source is not Epicurean.

With Epicurus out of court as a possible source for any significant portion of our tradition, the argument for derivation from Democritus becomes stronger. We know that the latter advanced several arguments for the view that language is a conventional rather than a natural phenomenon (B26): some words are synonyms (*isorropa*) and homonyms (*polysêma*) of each other;

[16] Note, however, that Diodorus, by making his *ethnê* descended from linguistic *systémata*, suggests that language had a role in the consolidation and continuance of society, if not in its initial formation; and two passages quoted earlier (above, note 2) for their parallels to the Diodorus-Vitruvius account of the origin of speech may contain echoes of the same idea. Cicero (*Rep.* 3.3) speaks of men as *ante dissociatos* who were later joined *sermonis vinculo*; and Horace says that wars continued until language was developed, whereupon men *oppida coeperunt munire et ponere leges* (*Sat.* 1.3.105). See also below, pp. 85–86.

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there exist certain things (*nônyma*) for which no word exists; and it is possible for a given object to receive a new name. This is, unfortunately, the only bit of Democritus' linguistic theory to survive,[17] and it is not sufficient to show that he discussed language in the same way as do Vitruvius and Diodorus, or even that he discussed its origin at all. He may have accepted the theory of an original linguistic *nomothetês*, or have been concerned only with the question—debated in the *Cratylus*—of whether words have anything to do with the real nature of the objects they designate. One should note, however, that the mention of the linguistic phenomena to which Democritus calls attention fits much better with an analysis of language along the lines taken by Vitruvius and Diodorus than it does with either of the alternate possibilities suggested. For synonyms and homonyms are to be expected in a structure that has grown up by a piecemeal and at times haphazard process—not in the work of an original *onomatothetês*, which would be arbitrary but presumably self-consistent.[18] And if Democritus simply meant to deny that words can tell us anything about the real nature of things it is hard to see the point of his reference to *nônyma*. *Nônyma*, once they are recognized as such, are more than likely to receive names. They can thus be expected to be less numerous in the future than they are at present, and they were, presumably,

[17] B142, in which the names of the gods are said to be *agalmata phônêenta*, and *VS* II 72.23–25, 74.18–22 (Leucippus A6 and 9), comparing atoms to letters, are sometimes adduced in support of the view that Democritus accepted, to some degree at any rate, a "*physis*" theory of the relationship between words and objects: see R. Philippson, "Platons Kratylos und Demokrit," *BPW* 49 (1929) 923–24; E. Haag, "Platons Kratylos," *Tübinger Beiträge* 19 (1933) 46–48; E. Hoffmann, "Die Sprache und die archaische Logik," *Heidelberger Abh. zu Philosophie* 3 (1925) 25–26; and P. M. Gentinetta, *Zur Sprachbetrachtung bei den Sophisten und in der stoisch-hellenistischen Zeit* (Diss. Zürich 1961) 29–32. The conclusion seems to me to be unwarranted. The alphabet analogies only show that both linguistic and physical structures are regarded as atomistic—not that one reproduces the other in some fashion (see A. Pagliaro, "Il 'Cratilo' di Platone," *Dioniso* 15 [1952] 183–85 and 197, note 8; E. Frank, *Plato und die sogenannten Pythagoreer* [Halle 1923] 169–71); and it is not words in general but only certain proper names which are compared in B142 to "voiced images." Greek proper names did as a rule have some fairly obvious "natural" as well as conventional meaning: "Democritus" is both a conventional designation for a fifth century philosopher and a "voiced image" of a man chosen by the people. Likewise with the names of the gods; cf. Democritus' own etymology of *Tritogeneia* (B2). *Phônêenta*, it should be observed, ordinarily means "speaking"—not "consisting of sound"; perhaps we should think of the *agalmata* as speaking only to those who are capable of understanding them—cf. Pindar's *βέλη φωνάεντα συνετοῖσι* (*Ol.* 2.83–85)—to the philosopher, for example, who finds in the name "Zeus" a representation of primitive conceptions of deity (see Appendix Four.) Pagliaro, *Dioniso* 15.185, and W. K. C. Guthrie, *A History of Greek Philosophy* 2 (Cambridge 1965) 476, take *agalmata* as referring to the mental images which words call forth, in which case the fragment may indicate (as Krokiewicz suggests, *Eos* 47, No. 1, 40) that Democritus was concerned with establishing the verbal and imagistic character of thought (cf. B145: *λόγος ἔργου σκιή*). But I doubt that *agalmata phônêenta* can have this meaning.

[18] Cf. Havelock, 118, who suggests that Democritus inferred from "some of the odd and illogical ways in which language behaves" that "its development depended to some extent on a human direction which was erratic."

more numerous in the past. Their existence—like the possibility of renaming objects—points to the growing and evolving character of language.[19] It tells us nothing about the "true" or "arbitrary" character of the body of designations in use at any given point in the process.[20]

There is thus no evidence against, and some evidence for, the assumption that Democritus envisioned a gradual growth of language through piecemeal, conventional accretions. If he did, and if he considered the development of technology and language in conjunction with each other, the whole *Kulturgeschichte* of the Epicureans may well have arisen from a Democritean prototype by the same process of borrowing and modification which produced Epicurean physics. As might be expected, Diodorus and Vitruvius, having no special philosophic bias of their own, preserve the prototype less completely, but with greater fidelity. It would be premature at the present stage of our investigation to accept such a hypothesis, but it is a hypothesis to which the succeeding three chapters of this study will bring strong, perhaps conclusive, support.

[19] Note also that Democritus' term *nônyma* recurs in Diodorus I in an evolutionary context. In the Aegyptiaca we are told that, as a result of the ingenuity of Hermes, *πολλὰ τῶν ἀνωνύμων τυχεῖν προσηγορίας* (1.16.1). On the relation of this passage to 1.8.3–4 (reproduced at the beginning of this chapter) see below, pp. 108–9.

[20] T. Gomperz (*Griechische Denker*[4] [Berlin and Leipzig 1922] 1.329–30), while recognizing that the fact that "manche Dinge oder Begriffe einer Bezeichnung entraten . . . kann . . . schwerlich etwas gegen das Vorhandensein eines inneren Bandes zu beweisen scheinen, das die benannte Dinge mit diesen ihren Namen verbindet," explains Democritus' reference to *nônyma* in a rather different fashion. Their existence shows that language lacks the *Vollkommenheit* and *Zweckmässigkeit* which should characterize a natural (or divine) phenomenon. This interpretation assumes that Democritus is concerned with establishing the arbitrary character of language as a whole. Yet the fragment speaks only of individual *onomata* as existing *thesei*. Democritus may well have held a similar view about the larger aspects of linguistic usage, but the two problems are different. It would be quite possible to maintain that, though the individual elements of language are arbitrary and conventional, the syntactic structures built up out of them do present an accurate reflection of *physis*. The historical interpretation offered in the text thus seems to me the more plausible explanation for the reference to *nônyma* in a defense of the view that *onomata* exist *thesei*.

CHAPTER FIVE

THE GENEALOGY OF MORALS (EPICURUS)

If the reconstruction offered in Chapter Four is correct, the tradition of thought we are examining made no sharp distinction between the problems of social and linguistic origins. Language provides the essential medium through which the formation and consolidation of society takes place. Diodorus, Vitruvius, and Lucretius are all more concerned with the purely linguistic phases of this process than they are with the social ones; but this shared preoccupation need not be a conclusive indication of the distribution of emphasis in the treatment from which our authors derive. Since the two topics of linguistic and social origins were so closely connected, they may well have received equal attention. Unfortunately, the texts examined thus far do not allow a definite solution to this problem, nor do they point the way, as did the analyses of language found in Diodorus and Vitruvius, to other sources from which their accounts may be supplemented.

Our investigation having reached something of an impasse, a brief detour becomes necessary. There are certain Epicurean texts in which a well developed theory of the genesis of society and social norms is to be found—a theory which, moreover, is closely connected with the Epicurean analysis of language examined in Chapter Four. The latter analysis, as we have seen, differs in important ways from that which belongs to what may be called the mainstream of our tradition. It is just possible that the Epicurean account of social origins differs in similar fashion from a discussion of the same subject which once stood in the main body of our tradition but which has not been preserved in any of the representatives of it considered thus far. If so, the four theories in question—the "orthodox" views of linguistic and social origins and the Epicurean "variants"—ought to stand in a sort of proportional relationship to each other. Epicurus' account of language would be related to its counterparts in Diodorus and Vitruvius as the Epicurean account of social development to *its* (hypothetical) counterpart. This being so, one should be able, knowing the first three terms of the proportion, to predict something about the fourth, and so to recognize any traces of it which may have survived in portions of ancient *Kulturgeschichte* not yet identified as belonging to our tradition. It is with this possibility in mind that we turn to a consideration of the Epicurean analysis of social origins.

It has long been recognized[1] that Epicurus, like certain fifth century thinkers,[2] viewed the common speech and the common notions of right and wrong which obtain in a given country as analogous phenomena. Both come into being by a natural process, to serve utilitarian ends; and both have a validity which, though not absolute, is nevertheless quite real. They "make sense" to a given people but are meaningless for mankind in general.

The surviving work of Epicurus himself contains no detailed discussion of the origin of notions of right and wrong comparable to the passage on language which appears in the *Letter to Herodotus*. But a portion, at least, of the Epicurean genealogy[3] of morals is given in a section of Porphyry's *De abstinentia* (1.10–11) which reproduces the theories of the first scholarch, Hermarchus:[4]

> It was with good reason that those who first prescribed what we ought and ought not to do made no prohibition against killing other animals. . . . For survival was not possible without an effort at self-defense on the part of those [among primitive mankind] who shared the same feeding-grounds (*tous syntrephomenous*). But some of the finer natures at that time (*tôn tote chariestatôn*), remembering how they themselves refrained from killing their fellows on account of its usefulness for survival, reminded the others also of what benefit resulted from their common pasturings (*tais met' allêlôn syntrophiais*) in order that, refraining from the slaughter of what was akin to them (*apechomenoi tou syngenous*) they might preserve the state of community which contributed to each individual's survival. For letting each other alone (*to chôrizesthai*) and doing nothing injurious to any of those who were collected into the same place was useful, not only for driving away the animals of other species, but also against men who came along with harmful intent. Up to a certain point then, men refrained from the slaughter of what was akin to them—as great a portion of their kindred as entered into the same sharing of the necessities of life and supplied certain needed services for the aforementioned purposes [driving away wild beasts and harmful men]. But later, when the generation of the race had progressed and the animals of other species had been driven away and an end made to their inroads, certain men gave rational consideration (*epilogismon*) to the advantageousness of their mutual way of life (*tais pros allêlôn trophais*), not simply

[1] See Philippson, 298.

[2] Cf. Plato, *Prot.* 327E–28A and Euripides, *Suppl.* 911–17, where acquiring *aretê* is compared to learning a language. This, combined with Protagoras' view that right and wrong "are" for each city as they seem to be (Plato, *Theaet.* 167C) is roughly equivalent to the Epicurean position. Cf. also the parallel fifth century expressions *glôssan* (or *phônên*) *nomizein* (Herodotus 1.142.3, 2.42.4, 4.183.4) and *dikên nomizein* (4.106). On the implications of this view, see Havelock, 192–93.

[3] Cf. Porphyry's introductory statement (1.7): *οἱ δὲ ἀπὸ τοῦ Ἐπικούρου ὥσπερ γενεαλογίαν μακρὰν διεξιόντες φασίν. . . .*

[4] For general discussions of this passage, see Philippson, 315–19; Haussleiter, *Der Vegetarismus in der Antike* 281–86; and Krohn, *Der Epikureer Hermarchos* 6–8. Krohn notes (8) what is perhaps a further fifth century echo: Hermarchus' discussion of the origin of penalties for accidental murder (not reproduced in the text) recalls Protagoras, *VS* 80A10.

> unthinking memory (*alogos mnêmê*). Hence they tried in more secure fashion to restrain those who rashly killed each other and thereby made the common defense weaker through their forgetfulness of what had happened in the past. Attempting, then, to do this, they introduced the legislation which still holds in cities and nations, the multitudes willingly following their lead, inasmuch as they had a better perception already of the advantage which lay in their aggregating with one another. For killing every harmful thing without quarter, and the preservation of what was useful for its destruction [non-aggression] contributed in like manner to security. Hence, of the aforesaid practices [homicide among tribesmen, killing of animals] the one was with good reason prohibited, the other permitted.

The origin of the prohibition against homicide is one illustration of the general Epicurean principle (*RS* 31, 33, 36) equating the just and the mutually advantageous. And there is indirect evidence here of an even closer dependence on the master. Hermarchus introduces into his account of the origin of social norms the same rather peculiar division into "natural" and "conventional" (or "rational") phases which was found in Epicurus' analysis of the origin of language.[5]

Man's original tendency to refrain from homicide is not, evidently, the result of conscious reflection. The connection between non-aggression and survival is something which the "finer natures" of the tribe "remember" from their own experience, evidently in the same way as one might remember an observed object or event. Perhaps the connection should be regarded as one of the *ou synorômena pragmata* of which, according to the Epicurean analysis of language, some men have a direct intuition (see above, p. 62). Once perceived and remembered, it is "recalled" to other men without difficulty. They understand what is referred to, just as they would if their attention had been called to some unnoticed portion of their visible environment. In similar fashion, one would assume, the first person to form and utter the "natural" word for something is immediately understood by his companions.[6]

[5] That analysis is introduced as a particular example of the general rule that *τὴν φύσιν πολλὰ καὶ παντοῖα ὑπὸ αὐτῶν τῶν πραγμάτων διδαχθῆναί τε καὶ ἀναγκασθῆναι, τὸν δὲ λογισμὸν τὰ ὑπὸ ταύτης παρεγγυηθέντα ὕστερον ἐξακριβοῦν καὶ προσεξευρίσκειν* (*Ad Herod.* 75); reappearances of the principle of development it illustrates are thus to be expected.

[6] Cf. the parallel statements on language and ethics found in Epicurus, *Ad Herod.* 38, and Cicero, *Fin.* 1.30:

> *ἀνάγκη γὰρ τὸ πρῶτον ἐννόημα καθ' ἕκαστον φθόγγον βλέπεσθαι καὶ μηδὲν ἀποδείξεως προσδεῖσθαι.*
>
> negat opus esse ratione neque disputatione quam ob rem voluptas petenda fugiendus dolor sit. sentiri haec putat, ut calere ignem, nivem esse albam . . . quorum nihil oportere exquisitis rationibus confirmare.

With what follows in *Fin.* 1.30—*tantum satis esse admonere. interesse enim inter argumentum . . . et admonitionem: altera occulta quaedam et quasi involuta aperiri, altera prompta et aperta iudicari*—compare the action of the "finer natures" in "reminding" others of "the benefits from their common pasturings."

Indeed, the two processes are identical when the word uttered is *dikaion* or *sympheron.*[7]

Later, when conditions of life are more settled, and being devoured by beasts a less frequent occurrence, the utility of non-aggression becomes less evident, hence easily forgotten. It must now be apprehended by a process of reflection,[8] and the prohibition against homicide to which such reflection leads cannot count on automatic acceptance from the whole population. It must, therefore, be embodied in laws which, like the conventional elements in language, owe their origin and dissemination to calculation and conscious agreement. Assuming that the earliest reminders were verbal, the whole process is an example of how the spontaneous and necessary word for an "unperceived thing"[9] becomes at a later date the subject of "rational interpretation."

The whole account exactly parallels the description of the origin of language and is open to similar objections. It is difficult to see how the connection between non-aggression and survival can be directly apprehended and retained in the memory like a series of sense perceptions. Memory will tell a man to seek out his fellows when in need of help; but to say, "I will not kill this man; he might help me at some time in the future," requires forethought as well as hindsight and the art of connecting one piece of data with another which is the work of *logismos* (or, more accurately, *synesis*), not of *alogos mnêmê*. Similarly, though certain associations of sound and object

[7] Cf. Epicurus, *RS* 31, which defines τὸ τῆς φύσεως δίκαιον as a σύμβολον τοῦ συμφέροντος εἰς τὸ μὴ βλάπτειν ἀλλήλους μηδὲ βλάπτεσθαι. The usual translation is "guarantee (or compact) of the mutually advantageous." But *dikaion* is what is defined by, or results from, such a compact; it is strange that it is here declared to be identical with the compact itself. A more natural translation is "symbol" or "expression" (suggested by Philippson, 292, who notes that the normal expression for "non-aggression pact" would be, as in *RS* 33, συνθήκη ὑπὲρ τοῦ μὴ βλάπτειν, or, as in Aristotle, *Pol.* 3.1280A39, σύμβολα περὶ τοῦ μὴ ἀδικεῖν). "Just" is the name which men give to actions which are advantageous, the symbol through which the latter are remembered and discussed with a view to avoiding the doing or suffering of evil. See also below, pp. 85–86.

[8] For the juxtaposition of *mnêmê* and *epilogismos* cf. *Pap. Herc.* 1056 Fr. 6, col. II 7–9 (p. 29 Diano, 328–29 Arrighetti) τοῦ ἐν ἑαυτῷ τέλους μνήμην καὶ ἐπιλογισμὸν λαμβάνον. It has been recently argued that for Epicurus *epilogismos*, by contrast with *logismos*, is primarily intuitive: "un atto conoscitivo che per giungere al suo risultato non abbisogni di alcun particolare processo logico, ma tale da compiersi più o meno nel fatto stesso che la mente si pone a considerare un oggetto" (G. Arrighetti, "Sul valore di ἐπιλογίζομαι, ἐπιλογισμός, ἐπιλόγισις nel sistema Epicureo," *Parola del Passato* 7 [1952] 123–24). Though Arrighetti is probably right in maintaining (137–44) that *epilogismos* does not mean "inductive inference" (the view taken by DeLacy, *Philodemus: On Methods of Inference* [Philadelphia 1941] 154) the difference in meaning seems to lie elsewhere: in the contrast between demonstration and proof (*logismos*) and the more informal, common-sense aspects of reason (*epilogismos*). For a reply to Arrighetti, see P. H. DeLacy, "Epicurean ἐπιλογισμός," *AJP* 79 (1958) 179–83.

[9] For the use of συνορᾶν in connection with moral perceptions cf. Polystratus, Fr. 7a2–5, where it is suggested that animals have no idea of right and wrong because καλά and αἰσχρά . . . οὐ συνορᾶται ὑπ' αὐτῶν.

may be automatic, the creation of a language through analogical extension of the principle involved would be the work of *logismos*. And if the "natural" creation of symbols assumed by Epicurus is unlikely, equally unlikely are his views about their communicability. As a general rule, neither the sounds which one man associates with certain objects nor the value assessments he attaches to certain types of action could be expected to be immediately meaningful to his fellows.

The greatly exaggerated role which Epicurus assigns to intuition in the initial stages of linguistic and social development is perhaps best illustrated by a comparison with the passage from Diodorus (1.90.1) quoted earlier (see above, p. 64) on the emblem which the early Egyptians used in assembling for defense. The situation envisioned there might fairly be described as one involving the use of *alogos mnêmê* rather than *logismos*. But the result of its application is merely to make men seek the help of their fellows again when there is danger; there is no mention of any more complicated perceptions resulting from the event. And what is retained in the memory is not even a unified picture of the warding off of an attack; it is a single sense impression: the standard which is the visible *sêmeion* of what has happened. It has been suggested above (pp. 65–67) that Diodorus' account comes from a context in which such *sêmeia* were seen as a first and almost accidental step toward the formation of a language. But this step is only the first of many. A gradual assigning of symbols to new situations or objects would have to follow, and though this process might be furthered at times by accidental occurrences like the initial one, it would have to involve, to some degree at least, *anchinoia* and *promêtheia*—the conscious calculation which, in the Epicurean view, becomes operative only when the general lines of linguistic and ethical usage are established.

It is just conceivable, of course, that Porphyry has abridged his source, and that, were Hermarchus himself preserved, the sequence of action he envisioned would be a series of concrete episodes like the one in Diodorus.[10] If, for example, in the early fight for survival a tribe had nearly been annihilated by enemies because of inner dissensions, it would be quite natural for the "finer natures" to say on subsequent occasions, "Don't fight; remember what happened last time"; and the admonition would certainly be based upon *alogos mnêmê*. But the omission of any hint of such an episode, the extremely abstract character of the language, and the term *chariestatoi*—suggesting insights of a less homely kind—all favor our earlier interpretation. Primitive morality is a natural reflex of man's immediate perception of the

[10] We can be fairly sure that Hermarchus is at least being paraphrased rather than quoted. See Krohn, *Der Epikureer Hermarchos* 5–6, for a list of words in this passage not attested in other third century texts.

sympheron as embodied in his whole social environment, just as primitive language is a direct reflex of the way in which he perceives the natural world. The only difference is that the former set of perceptions is found initially in only a small portion of the population, the *chariestatoi*. Neither morality nor language is conceived, as is the latter in Diodorus and Vitruvius, as the result of a series of reactions to specific events, reactions conditioned by these events and utilizing in calculated fashion the suggestions they provide.

Confirmation of this interpretation comes from Lucretius, who distinguishes the same two stages in the growth of morals as does Hermarchus. The first is contemporaneous with the beginnings of language (1019–20):

> tunc et amicitiem coeperunt iungere aventes
> finitimi inter se nec laedere nec violari.

The initial social compact described here seems even more clearly than its counterpart in Hermarchus to be the product of a spontaneous perception of the useful. The only cause given for its formation is the softening in man's character brought about by fire, houses, and family affection. Once this has occurred, the impulse to enter a social contract is evidently immediate and almost universal (1024–25):

> nec tamen omnimodis poterat concordia gigni
> sed bona magnaque pars servabat foedera caste.

Even the admonition of the finer natures is unnecessary.

Only later are formal laws introduced, to prevent the excesses stemming from revenge and competition for power (1143–47):[11]

[11] The passage here quoted and the earlier one on the social contract are separated by a description of the beginning, degeneration, and end of monarchy (1108–40). The notion that monarchy was a first stage in the development of a legal system, providing the protection achieved later through laws and responsible magistrates, appears elsewhere in Latin literature (Seneca, *Ep.* 90.6; Cicero, *Off.* 2.41–42), and there are doubtless traces of it here (see below, Chap. VI, note 18). But Lucretius' basic view of the institution is rather different. Monarchy does not arise in answer to a social need—it is the result of the attempt on the part of individuals to guarantee themselves security (1120–22):

> at claros homines voluerunt se atque potentes
> ut fundamento stabili fortuna maneret
> et placidam possent opulenti degere vitam.

The attempt to achieve this goal fails because of the rivalries it breeds (1123–26):

> ad summum succedere honorem
> certantes iter infestum fecere viai,
> et tamen e summo quasi fulmen deicit ictos
> invidia interdum contemptim in Tartara taetra.

Competition for *archê* may thus be regarded as one of the results of the forgetfulness of the advantages of cooperation and solidarity which Hermarchus mentions; but in the same passage (1148–50),

inde magistratum partim docuere creare
iuraque constituere ut vellent legibus uti.
nam genus humanum defessum vi colere aevum
ex inimicitiis languebat; quo magis ipsum
sponte sua cecidit sub leges artaque iura.

Here, as in Hermarchus, the instigators are a small group (cf. *partim* in 1143), and the innovation, though proceeding from them, receives general support because of its usefulness.

Lucretius himself may be responsible for the sentimental lines describing the role played by the family in the whole process (1021–23):[12]

et pueros commendarunt muliebreque saeclum
vocibus et gestu cum balbe significarent
imbecillorum esse aecum misererier omnis.

But the *philanthrôpia* evident here is Attic as well as Lucretian,[13] and to suppose that *imbecillorum esse aecum misererier omnis* is a notion capable of being conveyed in gestures is quite in keeping with Epicurus' peculiar views on the clarity and communicability of primitive man's perceptions.

The inflated importance which Epicurus assigns to the natural phase in the development of morals is explicable as the result of a too scrupulous adherence to his own sensationalism. Since justice, defined as *συμφέρον . . . τι . . . ἐν τῇ πρὸς ἀλλήλους κοινωνίᾳ* (*RS* 36), is an idea which answers to something in reality (*RS* 31: *τὸ τῆς φύσεως δίκαιον*), it is a *prolêpsis* rather than a false *hypolêpsis*.[14] As such it originates with the first person to utter the "natural" word for it,[15] and in the form of an *ἐπιβολὴν ἐπί τι ἐναργές*

Lucretius himself seems to envision another manifestation of the same tendency: it is the disorder stemming from immoderate revenge-taking which makes men willing to accept *leges artaque iura*. Yet another line of development is suggested by the fragment of Colotes (*ap.* Plut. *Adv. Col.* 30 1124D) which praises *οἱ νόμους διατάξαντες καὶ νόμιμα καὶ τὸ βασιλεύεσθαι τὰς πόλεις καὶ ἄρχεσθαι καταστήσαντες* as bringers of *ἡσυχία* and *ἀσφάλεια*: without them men would live an animal existence in which *ὁ προστυχὼν τὸν ἐντυχόντα μόνον οὐ κατέδεται*. Here either kings or constitutional magistrates are the sequel to a reign of violence which in Lucretius leads only to the latter. The sequence of events envisioned would seem to be similar to that given in Tacitus, *Ann.* 3.26.3 (to avoid the primitive rule of *vis* and *ambitio* men had recourse to laws—*aut statim aut postquam regum pertaesum*). Kingship is thus not always sharply distinguished from other forms of rule in Epicurean *Kulturgeschichte*, and it is not, as Philippson maintains (314–15), a necessary stage in the growth of society. There is agreement in substance between Hermarchus and Lucretius.

[12] Cf. P. Boyancé, *Lucrèce et l'épicuréisme* (Paris 1963) 243.

[13] Cf. Lycurgus, *Leocr.* 141, on the *κοινοῦ παρὰ πᾶσι ἐλέου* due to women and children. The speech antedates Epicurus' arrival in Athens by about a decade.

[14] For the opposition, cf. *Ad Men.* 124, and for *dikaion* as a *prolêpsis*, *RS* 37 and 38.

[15] For this identification of *prolêpseis* with initial impressions either of the objects which men encounter in their daily life or of "unperceived things" like *dikaion*, see Dahlmann, 13–14. Our interpretation of Hermarchus and Lucretius may shed some additional light on a question which has divided both ancient and modern interpreters of Epicurus (on the problem see, most recently,

(Clement, *Strom.* 2.4 = 255 Usener), not in *logismos*. *Logismos*, with the possibility for error which it brings, comes only at a later stage, to remedy the forgetfulness which the growing complexity of life has produced; and its solution is an imperfect one: a system of legal redress that creates new problems in place of the old (Lucr. 5.1151):

inde metus maculat poenarum praemia vitae.[16]

Though this position makes some sense in Epicurean terms, it seems not to have been held with complete consistency by the school. Fragments from a work of the second scholarch, Polystratus, embody a view which, though continuing to maintain the unity of *dikaion* and *sympheron*, gives to *logismos* a much more central role in the development of morality.[17] The work is a polemic against an opponent—presumably Sceptic or Cynic[18]—who has

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K. Kleve, *SO* Suppl. 19.23–34). Diogenes Laertius (10.33), followed by most modern commentators, says that *prolêpseis* are general notions and categories derived directly from observation. For Cicero however (*Fin.* 1.31; *ND* 1.44), followed by N. DeWitt (*Proceedings of the Royal Society of Canada*, Ser. 3, 36, No. 2, 36–44 and *Epicurus and his Philosophy* [Minneapolis 1954] 142–50) and A. S. Pease (in his note to *ND* 1.43), *prolêpseis* are innate ideas of justice and other intangibles. The source of the difficulty may be Epicurus himself, who seems to have regarded as arising directly out of experience certain notions which were usually analyzed in rather different fashion: as innate ideas (the Platonic doctrine of *anamnêsis*), as the result of conscious reflection (the view of certain Sophists, revived in the New Academy—cf. Cicero, *Rep.* 3.23), or as a combination of the two (the Stoic position—see below, pp. 138–39). Commentators on this doctrine may have been inclined to disregard the non-immediate, non-obvious objects of *prolêpsis*, either narrowing the meaning of the term so that it included only those *ennoiai* whose origin seemed explicable in simple empirical terms (Diogenes Laertius), or else explaining texts which spoke of *prolêpseis* of *dikaion* and the like by importing the extraneous notion of *innatae cogitationes*. The latter is the procedure followed by Cicero, inspired perhaps by the example of certain later Epicureans. Cf. *Fin.* 1.31, where, after stating as the view of his school that the desirability of pleasure is something "sensed" like the warmth of fire or the whiteness of snow (quoted above, note 6) Torquatus goes on to say that *sunt . . . quidam e nostris . . . qui negent satis esse quid bonum sit quid malum sensu iudicari, sed animo etiam ac ratione intellegi posse . . . itaque aiunt hanc quasi naturalem atque insitam in animis nostris inesse notionem.* (I assume, with Bignone, *RFIC* 37.62–64 and Reid *ad loc.*, as against Philippson, "Zu Ciceros Erstem Buche de Finibus," *RhM* 66 [1911] 232–34 and W. Liebich, "Ein Philodem-Zeugnis bei Ambrosius," *Philologus* 98 [1954] 124–25, that the *sensus iudicium* mentioned here is a *prolêpsis*, and that the innovation of *quidam* is not, as Liebich suggests, a transfer of the Stoic notion of *emphytoi ennoiai* to an order of phenomena where the Epicurean idea of *prolêpsis* did not originally apply, but rather an attempt to clarify, perhaps under Stoic or Platonic influence, an Epicurean use of the term *prolêpsis* which seemed obscure.) For a comparable fluctuation in the meaning of *prolêpsis* in Stoic texts, see F. H. Sandbach, "Ἔννοια and Πρόληψις in the Stoic Theory of Knowledge," *CQ* 24 (1930) 47–49.

[16] On Lucretius' whole conception of a "natural" society and morality replaced by the city-state and the rule of law see the discussions of B. Farrington, *Science and Society* 17.333–37, "*Vita Prior* in Lucretius," *Hermathena* 81 (1953) 59–62, and "Lucretius and Manilius on Friendship," *Hermathena* 83 (1954) 10–13.

[17] The work is entitled Περὶ ἀλόγου καταφρονήσεως (or Πρὸς τοὺς ἀλόγως καταθρασυνομένους τῶν ἐν τοῖς πολλοῖς δοξαζομένων) and was edited by C. Wilke (Leipzig 1905). For an analysis of its contents, see Wilke's introduction and Philippson, *NJbb* 23.487–94.

[18] On his identity see Wilke (above, note 17) xiii–xx, and Philippson, *NJbb* 23.494–506.

attempted to show the unnatural character of human notions of right and wrong by pointing out their absence from the animal world. Polystratus cannot reply, as an idealist might, by positing an innate sense of right and wrong as the characteristic mark of man which sets him apart from the beasts. He says, rather, that man's case is not analogous to that of the animals because they lack *logismos*—or at least the kind of *logismos* which men have (Fr. 6b4–7a7). Animals thus cannot foresee misfortune, or even avoid the recurrence of the same sort of disasters which they have once suffered (Fr. 3.4–4a6). The inference seems to be that all human morality, not just the later phases of its development, is the result of a calculated effort to achieve what is advantageous.[19]

The vacillation between the two positions is understandable, given the inner tensions of a school which at once glorified and distrusted reasoning.[20] The "natural" view of morality might be expected to appear when the Cynic or "primitivist" strain in Epicureanism is dominant, as in portions of Lucretius V; the "conventionalist" or "intellectualist" one on occasions when there is need to defend the school against the charge of animalism.[21]

But the fluctuation in point of view may be connected with other factors as well. Hermarchus and the analysis of language in *Ad Herod.* 75 take their place alongside two passages in Lucretius (5.942–44 and 1014–16) already noted because of their absence from accounts which otherwise resemble Lucretius quite closely (see above, pp. 27–28 and 34). Through all these Epicurean passages a consistent pattern can be traced: biological or environmental determinism is emphasized at the expense of the play of accident and human calculation.[22] The earth's greater productivity and man's greater hardness influence the character of the earliest period of human history (Lucretius 5.942–44 and 925–30); the warm surroundings produced

[19] Cf. D. L. 10.120 (=Usener 517): *τὴν δὲ ἀνδρείαν φύσει μὴ γίνεσθαι, λογισμῷ δὲ τοῦ συμφέροντος.*

[20] Or perhaps it is a difficulty endemic to empiricism. An identical vacillation has, at any rate, been pointed out in the thought of Locke, for whom moral ideas are alternately "evident in themselves" or principles requiring "reasoning and discourse and some exercise of the mind to discover the certainty of their truth" (see M. White, *Social Thought in America* [Boston 1957] 268–70). And the difficulty is compounded by a tendency, in Locke's interpreters as well as Epicurus', to confuse self-evident notions with innate notions, *prolêpseis* with *innatae et insitae cogitationes* (see above, note 15, and for Locke, White, *loc. cit.*).

[21] As in the sections of Philodemus' *Περὶ τῶν θεῶν*, I (col. xv 16–34, pp. 26–27 Diels) which seek to reply to the charge that, on Epicurean principles, animals are more fortunate than men because not troubled by the vain fears and imaginings produced by *logismos*.

[22] Cf. above, Chap. II, note 5. Reinhardt (*Poseidonios* 404) draws a correct contrast between Diodorus and Vitruvius on the one hand, with their emphasis on "Zufall und Willkür," and Epicurus on the other, where "die menschliche Entwicklung unter dem Gesetze des Naturzwanges steht." The difference in attitude is perhaps traceable in so small a point as the emphasis on necessity in Lucretius' and Tzetzes' closely parallel accounts of how man first took refuge in caves (see above, p. 29); the corresponding passage in Diodorus has *peira* rather than *anankê*.

by fire and housing bring about a softening in his character (5.1014–16); particular aspects of climate and topography are responsible for the configurations taken by language (Epicurus, *Ad Herod.* 75) and the initial prohibition against homicide is an automatic reaction to the fight for survival (Hermarchus). One wonders whether the common tendency to be observed here is not the result of a conscious reworking of parts of an older tradition along specifically Epicurean lines. If so, Polystratus' intellectualist position on the origin of morality may reflect the tradition in purer form: the starting point, perhaps, for the revised analyses which appear in Hermarchus and Lucretius. It is the emphasis on natural intuition to the exclusion of *logismos* which links both these accounts to the Epicurean theory of the origin of language; and, conversely, the presence of *logismos*—in the form of the calculation which must occur if men are to seize and build upon the suggestions provided by specific situations—is a characteristic feature of the account of the origin of language found in Diodorus and Vitruvius. Polystratus, though an Epicurean, applies to ethics an approach which has something in common with the approaches of Diodorus and Vitruvius to language. It is conceivable, then, that we have in Polystratus' account a remnant of what was once the fourth term of the proportion described at the beginning of this chapter.

Polystratus contains no reference to the role of the specific situation in the evolutionary process, and this is required if his work is to complete our proportion in expected and satisfactory fashion. But emphasis on the specific situation is a characteristic feature of another text—one which recalls Polystratus in the way it links a utilitarian morality to *logismos*, and which contains, in addition, a conception of the unfolding of the historical process through discrete episodes exactly paralleling the conception found in Vitruvius, Diodorus, and the whole analysis of technological origins examined in Chapter Two. It is to an examination of this text that we must now turn.

CHAPTER SIX

THE GENEALOGY OF MORALS (POLYBIUS)

In the sixth book of his *Histories* Polybius includes, as a sort of preface to his famous cyclical theory of the transformation of constitutions, an account of the development of society from its herd-like beginnings to the creation of the first government based on popular consent (in the special terminology used by Polybius, "kingship"). The sources of this passage have been the subject of much investigation.[1] Earlier studies assumed Stoic, Peripatetic, or (more rarely) Academic origin; in recent years Polybius has more often been seen as an eclectic.[2] The historian's obvious admiration for the *praktikos bios* of the statesman has tended to put Epicurus out of court as a possible source;[3] hence the very close parallels which link both Hermarchus and Polystratus to Polybius have been all but ignored.[4]

The passage in which these parallels appear begins after the first human society has been described (6.5.5–9), an animal-like herd (*systêma*) consisting of the survivors of a cataclysm which has wiped out a previous civilization. Violence rules, and the strongest and boldest enjoys unchallenged power.

> (6.5.10) But when, through the passage of time, there arises within these aggregations a common nurture (*syntrophia*) and a common way of life (*synêtheia*) this is the natural beginning of kingship and then first does a notion (*ennoia*) of the fair and the just come into being among men, and likewise of their opposites.
>
> (6.6.1) And the manner of their beginning and coming to be is as follows: (2) the sexual urge being a natural one and resulting in the birth of children, whenever any of the children men have brought up reaches maturity and neither shows favor to nor protects those by whom he has been reared, but does just the opposite, trying to say or do them harm, (3) this is obviously likely to displease and offend those present, who will have observed parents' concern and suffering on behalf of their children and the care and nurture the latter receive. (4) For, since the human race differs from the other animals in this, that it

[1] For a survey of it, see Walbank, 643–45.

[2] Cf., for example, the views of Taeger, *Die Archaeologie des Polybios* 19–27; Ryffel, *METABOΛH ΠOΛITEIΩN: Der Wandel der Staatsverfassungen* 198–202; E. Mioni, *Polibio* (Padua 1949) 66–68; and Walbank, 644.

[3] Cf. von Fritz, *Theory of the Mixed Constitution* 55.

[4] They are noted in passing by Walbank, 653 (*ad* 6.5.10), and von Fritz, *Theory of the Mixed Constitution* 413, note 46.

partakes in the faculties of reason and calculation (*logismos*), it is evident that the contrast of behavior just mentioned is not likely to escape their notice, as it would in the case of other animals; (5) rather, they will note the occurrence and be displeased with the situation, since they foresee the future and conclude that something similar may happen to each of them.

(6) And again, when someone has received aid or succor from another in moments of danger and does not show favor to his rescuer, but even tries to harm him, it is evident that he is likely to displease and offend by such conduct those who observe it, since they share their neighbor's indignation and imagine themselves in his position. (7) Out of which situation there arises in each man a certain notion and perception of the character of the fitting (*kathêkon*), which is the origin and end of justice.

(8) Likewise, whenever someone champions the cause of all in moments of danger and supports and withstands the attacks of the fiercest animals, it is likely that he will receive from the people marks of good will and pre-eminence, and that the man who does the opposite will be condemned and give offense.

(9) Whence, again, it is probable that there will arise among the people some notion of the shameful and the good, and the difference between them, and that the former will be emulated and imitated because of the advantages it brings (*to sympheron*) and the latter avoided.

The similarities between this account and the Epicurean ones just discussed are obvious. The existence of accepted ideas of right and wrong is here linked, as in Polystratus, with the *logismos* which distinguishes man from beast (6.4), and this, in turn, is analyzed by both writers as the ability to foresee future inconveniences and make provision to meet them.[5] Polybius

[5] The relation between the distinction drawn by Polybius and Hermarchus and Hellenistic controversies over the intelligence of animals is worth noting, since it has some bearing on the question of the source of the former. The terms *logos* and *logismos* are apt to cause confusion because they may refer to two different things: (A) common sense, the ability to look ahead and plan (*phronêsis* in Aristotelian terminology), or (B) the ability to apprehend and reason about forms or first principles (*sophia, nous*). No school, to my knowledge, ever maintained that animals possess B. The Stoics denied A to them; the Peripatetics maintained that they possess it to a degree (Aristotle being more cautious here than his successors; see Brink, 130), and their arguments were used and expanded by the sceptical Academy in its polemics against the Stoics. For the Stoic position, see A. Dyroff, "Zur stoischen Tierpsychologie: II," *Blätter für das Gymnasial-Schulwesen* 34 (1898) 416–30; A. Bonhöffer, *Epiktet und die Stoa* (Stuttgart 1890) 67–76; and, for the Academic polemic, Haussleiter, *Der Vegetarismus in der Antike* 209–10, and G. Tappe, *De Philonis libro qui inscribitur 'Αλέξανδρος ἢ περὶ τοῦ λόγον ἔχειν τὰ ἄλογα ζῷα quaestiones selectae* (Diss. Göttingen 1912) 22–38. The Stoic view, probably developed most fully by Posidonius (see Pohlenz, *Hermes* 76.1–13), ascribed to animals certain innate skills which are divine *pronoia's* device to insure their survival. These natural skills are constant and unvarying in every representative of a species (e.g. every swallow's nest is exactly like every other's), and this is what differentiates them from human *technê*, which is acquired, not innate, and varies greatly from individual to individual. The terminology used by Polybius and Polystratus (see above, pp. 77–78) suggests the Stoic position rather than the Peripatetic one; and it is conceivable that Polybius at any rate has been directly, if superficially, influenced by Stoic doctrine (see Appendix III). But, unlike the Stoics, neither author is concerned with *sophia* at all. Whereas

refers to common notions of morality as *ennoiai* (5.10; 6.9) of the good, the shameful, etc. The phraseology suggests intellectual perception of a moral absolute—and an Academic, Stoic, or Peripatetic rather than an Epicurean context. But the meaning of *ennoia* demanded by the context is simply common notions about right and wrong[6]—the purely social morality which Polystratus refers to as τὰ παρ' ἀνθρώποις νομιζόμενα (col. XIVa3–5); τὰ καλὰ καὶ αἰσχρὰ νομιζόμενα (XVa3–4; cf. XVIa9–11) or simply *kala* and *aischra* (Fr. 7a2). Polybius does not have the characteristic Epicurean *dikaion-sympheron* equation, but his statement (6.9) that the good and shameful are sought out and avoided διὰ τὸ συμφέρον amounts to the same thing.[7]

The detailed account of the process by which social morality comes into being falls into two stages (5.10 and 6.1–9), the first of which offers close parallels to both Hermarchus and Diodorus. Polybius reports that during

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the Stoics would explain moral ideas as a result of man's having a share of divine *nous*, Polybius and Polystratus derive them from the operations of a purely utilitarian *phronêsis*. Moreover, there is no reason to believe that they would have agreed with the Stoics in viewing animal behavior as completely instinctual. They may have been thinking in terms of a *logos-mnêmê* rather than a *logos-physis* antithesis: cf., for example, the contrasts between *alogos mnêmê* and *epilogismos* in Hermarchus and between *mnêmê* and *anchinoia* and *oxytês* in Photius, *Cod.* 249 440B39; or Sextus' definition (*Adv. math.* 1.61) of *empeiria* as a τριβή τις . . . ἐργάτις ἄτεχνός τε καὶ ἄλογος. What Polybius and Polystratus have in mind is probably much closer to the fairly commonplace recognition of man's superior ability to control his life than it is to any formal philosophical doctrine; cf. Aeschylus' personification of human intelligence in the figure of Prometheus, and, more specifically, Alcmaeon of Croton, *VS* 24B1a (man differs from the animals in that he alone ξυνίησι, τὰ δ' ἄλλα αἰσθάνεται μέν, οὐ ξυνίησι δέ); Anaxagoras, *VS* 59A101 (animals have the *energêtikon*—"activist" [cf. *ergatis* in Sextus]— but not the learning type of intelligence); Euripides, *Tr.* 671–72 (animals do not possess the use of *synesis*); Agatharchides *ap.* Photius, *Cod.* 250 456A29 (animals learn to be prudent not by *logos* but παραπεπλεγμένης ἐναλλὰξ τῷ πάθει τῆς μνήμης).

[6] This meaning can be paralleled in contemporary ethnographical writing. Cf. Agatharchides *ap.* Diodorus 3.15.2 (=Photius *Cod.* 250 449A27): the nakedness and promiscuity of the *ichthyophagoi* shows that they have no αἰσχρῶν καὶ καλῶν ἔννοιαν; and Photius, *Cod.* 250 450B4–8: τῶν δὲ εἰθισμένων ἀνθρώπῳ πρὸς ἄνθρωπον οὐδὲ τὴν ἐλαχίστην διδόασιν ἔννοιαν. The parallel with Polybius is particularly close in the second example, for it is the failure of the Ichthyophagoi τοῖς πάσχουσι συναγανακτεῖν (B3–4=Diod. 3.18.5) which makes the author conclude that they have no conception of *eithismena* among men. So in Polybius 6.6.6 an *ennoia* of just and noble arises first among those who share their neighbor's indignation at some injury he has suffered (συναγανακτοῦντας τῷ πέλας—see below, p. 89). Diodorus' remark (3.49.2) on a certain tribe of robbers in Libya, οὔτε τοῦ δικαίου λόγον οὐδ' ἔννοιαν ἔχον, may also go back to Agatharchides; see H. Leopoldi, *De Agatharchide Cnidio* (Diss. Rostock 1892) 37 ff. In all these passages the *aischra* and *kala* of which men have no notion are simply social tabus and mores (*eithismena*), not moral absolutes.

[7] The purely verbal character of the parallels between Polybius and the Stoics is nowhere more apparent than here. A Stoic might maintain the identity of *kalon* and *sympheron* (cf. Panaetius' view as reported by Cicero, *Off.* 2.9); and he might view as *kathêkonta* (though not as *katorthomata*) the social mores whose origin Polybius describes (cf. Chrysippus *ap.* D. L. 7.108); but he would never suggest, as Polybius does here, that men arrive at a perception of the Good and then seek to attain it διὰ τὸ συμφέρον. (For an equally un-Stoic use of the *kalon-sympheron* antithesis, see the passage discussed by von Fritz, *Theory of the Mixed Constitution* 57.)

the period which follows the formation of the initial human herd there arise among its members *syntrophia* and *synêtheia*. The former idea appears in Hermarchus: it is the "fellow pasturers" (*syntrephomenoi*) who form the first aggregations and the memory of the advantages gained through their *syntrophiai* which creates the prohibition against homicide.

Polybius' statement should also be compared with one which, in Diodorus 1.8, appears between the mention of the initial aggregations formed for protection and the account of the origin of language (see above, Stage 4A, p. 33). There men are said to have "come gradually to recognize each other's mutual characteristics."[8] Diodorus and Polybius seem to be describing the subjective and objective aspects of the same process: on the one hand, a recognition on the part of man of the traits he shares with his fellow, and, on the other, an assimilation of individual characteristics to each other which takes place once men are collected into a group. Both phenomena are natural consequences of the herd life which Polybius, Hermarchus, and Diodorus all assume for early man. Men have the same basic needs; hence, once assembled, they will all seek to provide themselves with the same necessities of life (*syntrophia*) and behave in much the same way as they do so (*synêtheia*). In this manner further similarities linking them to each other will become apparent. And the implication seems to be that like is attracted to like, so that such a perception would produce a more closely knit social unit.[9]

This interpretation can be supported by further passages in both Polybius and Hermarchus. The former's account of the initial human aggregation is as follows (6.5.6–7):

> When, from the survivors [of the initial cataclysm] . . . there is bred up anew with the passage of time a large number of men, then obviously, just as in the case of other animals, so in their case too, when they have assembled (which is likely—that they too should collect with those of their kind on account of their natural weakness) the strongest and boldest will hold power, just as in animal herds the strongest member lords it over the rest.

It is "natural weakness"—hence fear and the selfish considerations arising from it—which impels man to seek the companionship of his fellows. At the same time, the very fact that he feels more secure in such company than alone or among other animals indicates that, even at this stage of development, there is a certain natural affinity among members of the same species. And despite Hermarchus' strong emphasis on utilitarian motives, he too assigns a

[8] For the idea, cf. Ovid, *AA* 2.476 (on the primitive state of mankind): *iamque diu nulli cognitus alter erat* (a parallel noted by Spoerri, *MusHelv* 18.75, note 68).

[9] For other passages in Greek literature dealing with the conciliating effects of *synêtheia* and *syntrophia* see below, pp. 132–34.

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subordinate role in the development of social norms to the same natural affinity.[10]

The two motivations, gregariousness and self-interest, might seem contradictory, and so they are if there is to be a single *aitia* for society.[11] But Diodorus, Polybius, and the Epicureans all envision a situation in which the two factors are supplementary rather than mutually exclusive. Men are *volgivagi* rather than *solivagi*. If they were not, there would never have been enough of them together at one time for the utility of a common defense to suggest itself. On the other hand, the need for protection is the more immediate and, initially, at any rate, more important cause for their forming closer aggregations. How the two factors might have worked together is suggested by Porphyry's statement (1.10, see above, p. 71) that the prohibition against homicide extended to those who "entered into the same sharing of life's necessities and helped provide needed services against enemies." The phrase implies both a purely utilitarian agreement and a rudimentary feeling of community arising from shared experiences and hardships.[12] Naturally, the two would interact on each other, fellowship stimulating cooperation and vice versa. And both could be expected to extend that consciousness of mutual traits which Diodorus mentions.

The details noted thus far would serve to place Polybius in the general tradition of thought present with variations in Hermarchus and Lucretius as well as in Diodorus and Vitruvius. The emphasis on *logismos* suggests the

[10] Cf. *De abst.* 1.10: ἀπεχόμενοι τοῦ συγγενοῦς (quoted above, p. 71) and 1.7: τάχα μὲν καὶ φυσικῆς τινος οἰκειώσεως ὑπαρχούσης τοῖς ἀνθρώποις πρὸς ἀνθρώπους διὰ τὴν ὁμοιότητα τῆς μορφῆς καὶ τῆς ψυχῆς εἰς τὸ μὴ προχείρως φθείρειν τὸ τοιοῦτον ζῷον. A. Grilli, *Il problema della vita contemplativa nel mondo greco* (Milan 1953) 73–74, believes this to be a Stoic conception which Porphyry has injected into the discussion on his own. It is certainly possible that the term *oikeiôsis* did not appear in Hermarchus' text. Yet the word is not used in its specific Stoic sense (see below, pp. 138–39) but in a way which can be paralleled in Theophrastus (*ap.* Photius, *Bibl.* 278 529B22–23—on the bee's *oikeiôsis* for the oak tree). And since the Epicureans recognized the natural character of love for offspring (cf. Demetrius Laco in *Pap. Herc.* 1012 col. 44.5–46.11, p. 48 de Falco), there is no reason to believe that they would have denied the existence of a certain natural sociability in man. This does not mean that they would have assigned to such social impulses a major role in the creation of society (the view of G. Garbo, "Società e stato nella concezione di Epicuro," *Atene e Roma* Ser. 3, 4 [1936], 243–62, which Grilli rightly rejects).

[11] Carried to their logical extreme, the two ideas become, respectively, the Stoic-Peripatetic theory of a fully developed social instinct which brings men together, and the view of government as a compact of weak against strong or of all against all which is advanced by Callicles in the *Gorgias* and by Glaucon in *Republic* II.

[12] For comparable views, in an Epicurean context, see Lucretius 4.1283: *consuetudo concinnat amorem*; D. L. 10.120: [γίνεσθαι] τὴν φιλίαν διὰ τὰς χρείας . . . συνίστασθαι δὲ . . . κατὰ κοινωνίαν τοῖς ταῖς ἡδοναῖς ἐκπεπληρωμένοις; and Cicero, *Fin.* 1.69: "itaque primos congressus copulationesque . . . fieri propter voluptatem; cum autem usus progrediens familiaritatem effecerit, tum amorem efflorescere tantum ut, etiamsi nulla sit utilitas ex amicitia, tamen ipsi amici propter se ipsos amentur."

Diodoran version of this tradition; on the other hand, we have seen no trace, as yet, of a concern with the role of specific incidents in cultural change—no trace, in other words, of the characteristic and unique features of the *Kulturgeschichte* present in Diodorus and those accounts, whether technological or linguistic, related most closely to his. But the second phase (6.1–9) of Polybius' account of social origins reveals such a concern quite clearly, making it obvious that it is with Diodorus, rather than with the Epicurean texts examined in Chapter Five, that his real affinities lie.

Polybius describes three parallel situations (6.2–5, 6.6–7, 6.8–9) out of which social attitudes arise. In all three a similar process is involved, which can be summarized as follows: an incident occurs—a case of filial ingratitude or of injury to a benefactor or of unusual bravery or cowardice in battle—which for some reason makes an impression. Men reflect on the incident and by virtue of their ability to calculate and reason are able to imagine how they would be affected if such incidents were of general occurrence. If the consequences thus pictured are unpleasant, they are indignant and express disapproval of the person responsible for the incident. If pleasant, they praise and honor him. The result, in the last episode, is that actions to which praise is attached are imitated, and those to which blame is attached avoided: i.e. become the content of those social norms which Polybius describes as *ennoiai* of the good and the shameful. It would be natural to assume that similar social sanctions would arise out of the two situations described earlier.

All three episodes are quite analogous to those which, in Diodorus and Vitruvius, give rise to language and technology. They involve a similar interaction between a situation arising in man's natural or social environment and man's own ability to calculate and look ahead. There occurs an incident of the sort which is likely to come in the normal course of things, and which contains within itself the germs of subsequent utility (or, in Polybius, disutility) for man. A forest fire liquefies a vein of metal, a cry of terror proves successful as a rallying cry, some man shows signal bravery or signal ingratitude. Man the calculator looks to the future and sees the advantages or disadvantages which will result if the incident he has witnessed recurs, or is duplicated somehow. The molten metal which follows the contours of the ground over which it flows may assume the shapes men give it; a rallying cry may serve as a constant safeguard against attack; anyone may be the recipient of signal good services or signal ingratitude. The result is that man takes steps to see that what has occurred once by chance either does not occur again at all, or else recurs frequently.

It is perhaps not too bold to suggest a further similarity. Fear of an enemy is a feeling so universal in the human race and so easily made known to others

that it is natural to suppose, as the sources of the passages from Diodorus and Lactantius quoted above evidently did, that danger would be one of the first notions for which men succeeded in finding a common linguistic or non-linguistic symbol. Similarly, the performance of exceptional services or the attempt to harm a benefactor which figure in Polybius might seem to be incidents which, like the approach of danger, are likely to be regarded by all men with very similar feelings. Hence it would be natural to suppose that the first words indicating value judgments of any sort would be nouns or adjectives used in reference to unprovoked violence or unusual well-doing. It is possible, then, that behind Polybius' use of expressions like *ennoia* lies an account of the origin, not simply of *ennoiai* of the *kalon* and *aischron*, but of the words themselves. Such words would be, like their counterparts in Epicurean theory (see above, pp. 72–73 and 75), the result of a perception of *τὸ συμφέρον ἐν τῇ πρὸς ἀλλήλους κοινωνίᾳ*; but, unlike those counterparts, they would have their meanings rooted in a single, shared experience. Generalization would only come later, as the specific instances of desirable and undesirable behavior fixed in men's memories by the words attached to them came to be associated, along with similar instances, into types and categories. Since men are guided in their conduct by things labeled *kalon* and *aischron*, this fixing and extension of meaning would greatly further the process which Polybius is describing—the standardization of conduct into *nomizomena*.

It might be argued that Polybius simply assumes the existence of language throughout his account and does not attempt to link its rise with the social process. There is, however, one passage which suggests that his source, at least, envisioned a time when language did not exist. The analyses of language quoted earlier refer to words as *sêmeia* or *symbola*. Polybius says of filial ingratitude that men are likely to note it (*episêmainesthai*), and those who are benefactors receive *episêmasias eunoikês* (6.8). By these expressions he evidently means that the incident of ingratitude will be mentally noted and remembered, and that the benefactor receives respect and deference. But behind the terminology there may lie the idea that, if anything is to be noted and marked for future recognition, it must have, first of all, a name.[13]

It is characteristic of Polybius that, though he assigns a significant role in the social process to *logismos*, its achievements taken stage by stage are much

[13] Cf. Xenophon, *Mem.* 4.3.11–12; Aristotle, *Pol.* 1.1253a7–18; and Isocrates, *Nicocles* 5–9 (=*Antidosis* 253–57), all of which stress the importance of *logos* in the development of a specifically human culture and link man's *logos* very closely to his ability to make judgments about *kalon*, *dikaion*, and *sympheron*. Xenophon's account is especially relevant, since it contains a conception of the role of *logismos* which closely parallels Polybius': *λογισμόν . . . ᾧ περὶ ὧν αἰσθανόμεθα λογιζόμενοί τε καὶ μνημονεύοντες καταμανθάνομεν ὅπῃ ἕκαστα συμφέρει.* On the parallels between the three passages cited here see, further, H. K. Schulte, "Orator," *Frankfurter Studien zur Religion und Kultur der Antike* 11 (1935) 19–20, and Pfligersdorfer, *WS* 61/62.31 with note 67.

less far-reaching than those Hermarchus attributes to mere *alogos mnêmê*. The difference is roughly comparable to that observed above (p. 74) between Hermarchus and the *sêmeion* passage in Diodorus 1.90. Here as well as elsewhere, Polybius offers a remarkably consistent and subtle application of those principles of historical gradualism whose influence pervades the whole speculative tradition we are examining. The stage where all members of society refrain from homicide is not even reached in his narrative. His first two episodes are the sort out of which a general prohibition against violence might ultimately arise. But at this stage man's *logismos* can only be stimulated by incidents where the violence is of the most shocking kind—against parents or comrades-in-arms—and where the possible undesirable consequences are most immediately obvious. Polybius was evidently aware of the special character of such types of behavior; for it is this awareness which explains the relevance to what follows of his initial mention of *syntrophia* and *synêtheia*. The existence of a common nurture and a common way of life, along with the accompanying consciousness of mutual characteristics that arises in the first herds, provides a necessary background against which the subsequent incidents of violence are set off and made to seem significant.

Social attitudes arise from the sort of situations which animals overlook, but of which man takes note and whose implications he perceives or foresees. Polybius does not state explicitly why man's attention is drawn in the first place toward instances of ingratitude or bravery, but in speaking of the ungrateful child he mentions a contrast or difference of behavior which men notice: *οὐκ εἰκὸς παρατρέχειν αὐτοὺς τὴν προειρημένην διαφοράν* (6.4). The contrast referred to is presumably that between the parent's care for the child and the child's indifference or hostility. Similar *diaphorai* are involved in the conduct of the man who requites help in battle with injury, and in that of the champion who returns to those who assist him in the common defense more than they themselves contribute individually. Since it is not the return of like for like which calls attention to itself, but failure to do so, it would be natural to assume that gratitude is the more usual form of behavior in man's primitive state, ingratitude a deviation and for that reason unexpected. And the same would hold true for animals, since it is only the absence of *logismos* which makes them fail to notice the *diaphora* involved in ungrateful behavior.

While this would obviously not apply to the initial cannibalistic situation referred to in Diodorus 1.90, it would be natural at a more advanced stage of herd life. At this point both man and animals have undergone the assimilating influence of *syntrophia* and *synêtheia* to the extent that there will be a certain uniformity in the way they react to stimuli: non-aggression and help in defense against other species will tend to be reciprocated when they

occur, thus intensifying the vague feeling of greater security and well-being which animals of the same species have in each other's presence from the start.[14] The effects of *syntrophia* and *synêtheia* would naturally be most pronounced where the association between individuals is closest—in the family. Parents become accustomed to the mutual affection and cooperation which characterizes their relationship to their offspring all the time that the latter are growing up, and which may continue, by force of habit, into the period when the offspring no longer need their parents. The inevitable assertion of independence may not be noticed unless it comes with particular violence or suddenness; then, however, the sharp break with the earlier state of affairs calls attention to the *diaphora* involved in the child's conduct. The same reactions, though to a less pronounced degree, could be expected to occur when the relation involved is that between comrades-in-arms of long standing.

In both the human and animal herd, then, there exist certain tendencies toward reciprocal behavior which, accentuated and expanded, are capable of producing society. Under certain circumstances, these tendencies are in themselves sufficient to create a pattern in the lives of animals and men whose violation will produce surprise accompanied by pleasure or displeasure, depending on whether return for services is greater or less than normal. A man, however, unlike the animals, notices and remembers such incidents, looking to their recurrence with fear or anticipation. If only two people are involved, his indignation or pleasure will doubtless come to nothing. But when, as in the third of the situations envisioned by Polybius, the reaction involves a number of people, they will see that the expression of collective sentiment has some effect on the behavior of the person who is its object. Hence they cease merely to register emotions and begin to encourage or discourage the recurrence of the incident. The result is that, whereas animal behavior remains more or less constant, the forms of behavior men encourage tend to become steadily more common.[15]

The development here described is one which will occur when the incidents involved are such as to produce pleasure or displeasure directly—i.e. incidents in which men are personally involved. A somewhat similar, though more complicated, process takes place when, as in the first two episodes of Polybius' account, the incident involves another person. Then the observer must draw a general conclusion from a specific event and infer

[14] For parallel passages containing this view of the effects of *synêtheia* and *syntrophia* in the animal world, see below, Chap. IX, note 2.

[15] For an explicit statement of the *logos-synêtheia* antithesis which is here inferred for Polybius, see Agatharchides *ap.* Diod. 3.6.2 (a foolish *synêtheia* which remains in operation through the absence of any *logos* sufficiently strong to overcome it). There the function of *logos* seems to be to remove what is bad in human *synêtheia*; in Polybius it is to improve and strengthen what is good.

that what has happened to someone else can just as easily happen to himself.[16] This inference, like the feelings of surprise and concern which precede it, has its roots in *synêtheia* and *syntrophia*. When a man observes an incident of filial ingratitude and puts himself in the place of the injured party he is making an important assumption: namely, that all men are basically alike, that what can happen to one of them may just as well happen to anyone. Men are likely to make such an assumption only when their experience justifies it—i.e. when they live among a group of individuals who are linked together by *synêtheia* and whose common characteristics they have come to recognize.

The process is not entirely an intellectual one. Polybius gives a hint of the existence of other factors when he says of the men who observe an incident of ingratitude that they "share their neighbor's indignation and put themselves in his position" (6.6: *συναγανακτοῦντας μὲν τῷ πέλας, ἀναφέροντας δ' ἐφ' αὑτοὺς τὸ παραπλήσιον*). Resentment obviously stems partly from rational considerations: the observers fear a similar fate for themselves. But the passage seems to be describing, in addition, one of the fundamental sources of any sort of sympathy: the tendency all men have to imagine themselves in the place of the sufferer. That sentiment is involved is suggested by the verbs used both here and in other passages which describe the general reactions to wrongdoing: *προσκόπτειν*, *δυσαρεστεῖσθαι*, *συναγανακτεῖν*.[17] All connote a certain amount of emotional involvement. In the later as well as the initial phases of the social process, Polybius seems to recognize the existence of a basic well-wishing among members of the same herd—a well-wishing which he continues to regard, I suggest, as a product of that sharing of life's necessities and provision of needed services which Hermarchus connects with *syntrophia* (see above, pp. 82–84).

The ethic of Polybius is a social one, not only because it governs relations between members of a single society, but also because, given the gradual workings of the mental and historical processes, it cannot arise outside of society. Its prerequisite is a period in which close association generates a feeling of community, along with certain common habits and a corresponding awareness of them. Only after such a period of association will divergence from common patterns of reciprocal behavior give rise to those feelings of surprise and shared indignation which lead to the crystallizing of a vaguely defined habit into standards of conduct enforced by social sanctions. And

[16] The third situation is comparable to the discovery of fire, the first two to that of the planting of seeds (see above, pp. 15 and 37). With fire man has merely to find some way of prolonging a process whose usefulness he cannot help but notice; with the shoots which spring up around the base of trees he must be able to foresee the potential usefulness of what is of no present concern to him.

[17] The point is made by von Fritz, *Theory of the Mixed Constitution* 58.

only through perception of these generic traits will the reasoning and calculating faculty come to the realization—an essential one if any general conclusions are to be drawn from a single incident—that what happens to one man can just as easily happen to anyone else.

It may seem rather odd that Polybius does not in these contexts make any reference to what one might expect to figure alongside indignation and social sanctions: violent private retaliation and the ensuing blood feuds. The omission is not, however, an oversight. Allowance is made for these, as well as for all the violent aspects of man's early relationships with his fellows, in the portions of the exposition which relate to the institution of kingship and its forerunners. The relevant passages (6.5.7–9 and 6.6.10–12) immediately precede and follow the section on the *ennoiai* of good and evil just discussed:

> [In the initial aggregations] the one who excels in bodily strength and boldness of spirit necessarily leads and rules, for this phenomenon, observed in the case of the other, unreasoning animals, must be considered an indisputable example of instinctual behavior (*physeôs ergon alêthinôtaton*). Among them we observe the strongest enjoying unquestioned mastery—among bulls, that is, and goats and cocks and the like. It is likely, then, that men as well had this mode of life in the beginning, herding together in animal fashion and following the lead of the bravest and strongest. Among them there was one thing which determined rule (*horos tês archês*)—physical strength, and the name one would give this regime is "monarchy." . . .
>
> When, in these situations [the ones out of which arise the *ennoiai* described in 6.2–9] the leader and most powerful man always adds his own weight to the aforesaid [tendencies] in keeping with the notions of the people and seems to his subjects to be the sort who gives each man his due, then, no longer through fear of superior force, but rather because they approve his judgment, they submit to and preserve his rule, even if he is quite an old man, defending him with a single will and fighting against those who lay plots against his power (*dynasteia*). And it is in this fashion that, without its being realized, a king replaces a monarch—when reasoning takes over the leadership from daring (*thumos*) and force.

The first human herd is not a mere aggregation for common defense against the wild beasts. It is under the absolute sway of its strongest and boldest member (6.5.7). And the development of social norms described in 6.6.2–9 does not lead to the deliberate institution of a set of laws to enforce them. The first innovation is of a much less far-reaching character and, characteristically, arises out of an accident. Here, as in the texts examined in Chapters One, Two, and Four, the *eventus fortuitus* occupies a central role. At a certain point in history the ruling man happens to "add his weight" to the force of popular notions of what is right and proper (perhaps by punishing offenders) and gains a reputation for "giving each man his due" (evidently by adjudi-

cating disputes). Such a man rules by consent as well as by force, and his subjects unite to keep him in power even when he is old and feeble. The mutual advantages to be gained from the system are evidently sufficient to bring about its adoption by the man's successors, who go about fortifying hilltops for the protection of their people, and exercise, in general, a rule in accordance with its wishes. If they fail to do so they are deposed (6.7.3–4). So "kingship" (rule by consent and with a rational expectation of advantages to be gained) replaces the primitive rule of force ("monarchy").[18] Since it is his effectiveness both as punisher of offenders and adjudicator of disputes that wins the king his position, it is reasonable to assume that private

[18] There are parallels between this portion of Polybius' account (6.7.4) and Lucretius 5.1108–11: *τὸ μὲν οὖν παλαιὸν ἐνεγήρασκον ταῖς βασιλείαις οἱ κριθέντες ἅπαξ . . . τόπους τε διαφέροντας ὀχυρούμενοι καὶ τειχίζοντες καὶ χώραν κατακτώμενοι, τὸ μὲν τῆς ἀσφαλείας χάριν, τὸ δὲ τῆς δαψιλείας τῶν ἐπιτηδείων τοῖς ὑποτεταγμένοις.*

> condere coeperunt urbis arcemque locare
> praesidium reges ipsi sibi perfugiumque
> et pecus atque agros divisere atque dedere
> pro facie cuiusque et viribus ingenioque.

It is possible that Lucretius is here drawing ultimately on the source used by Polybius. If so, he has subjected it to characteristically Epicurean modifications. The fortifications described are only for the protection of the kings (*ipsi sibi perfugiumque*), who are not, as in Polybius, acquiring new lands but merely dividing up what is already available. The benefactor-king is thus transformed into a good Epicurean in quest of what is useful—*ut fundamento stabili fortuna maneret* (see above, Chap. V, note 11). Yet traces of his original social function are still detectable. The division of possessions *pro facie cuiusque et viribus ingenioque* is one dictated, not by whim or personal prejudice, but by the then prevailing notions of what was right and wrong (1112–14):

> nam facies multum valuit viresque vigebant.
> posterius res inventast aurumque repertum
> quod facile et validis et pulchris dempsit honorem.

Here the king is simply society's spokesman in the assigning of rewards for the services of outstanding individuals (see the parallel passages in Diodorus and Vitruvius discussed above, pp. 34–35); and Lucretius' source may even have suggested that it was an ability to seem *διανεμητικὸς τοῦ κατ' ἀξίαν ἑκάστοις* (Polybius 6.6.10) in the eyes of his subjects that got the king his office. But the parallels with Polybius should not be stressed unduly. Lucretius' whole account is somewhat heterogeneous, and most of what is not specifically Epicurean in it can be paralleled elsewhere. In apportioning goods among their subjects Lucretius' *reges* are doing the same thing that won Deioces the kingship of the Medes (Herodotus 1.96.2–98.1); and their fortification of cities is an activity with which early kings are frequently credited in history and euhemerist romance: cf. Ephorus, *FGrH* 70F147 (Minos); Apollonius Rhodius 3.1088–89 (Deucalion); Diodorus 2.38.5 (Dionysus in India), 3.61.3 (Cronus in Sicily and Libya); Megasthenes, *FGrH* 715F12, p. 617.2 (Dionysus in India); Pliny, *NH* 7.194 (Cecrops); Scholiast *ad* Eurip. *Or.* 1646 (Pelasgus). The importance of physical beauty in primitive society is stressed in Euhemerus, *FGrH* 63F14 and *Oracula Sib.* 3. 127–28 (beauty determines which among the sons of the world's first ruler, Uranus, succeeds to his kingdom). The Ethiopians (Diodorus 3.9.4; Pomponius Mela 3.86) are credited with the same mode of election, doubtless because of their recognized status as a *Naturvolk*. Cf. also Onesicritus, *FGrH* 134F21, p. 730.26–27, on the Cathaeans.

reprisals for aggressive acts, not simply the aggressive acts themselves, were responsible for the violent character of life in the earliest human aggregations.

Polybius' insistence on the initial reign of violence and the role of the monarch turned king in ending it is, like his insistence on the historical role of *synêtheia*, of central importance for the whole conception of continuous and gradual change which Book VI seeks to develop. The growth of society may be said to involve, primarily, the expanding and strengthening of those ties based on reciprocal well-doing which originate in *synêtheia*; this expansion takes place at the expense of the rule of force and fear which prevailed almost exclusively at the beginning of man's history. Were it not for the presence of the monarch, the formation of the first *systêmata* might seem to have been an excessively easy victory for cooperation over force, establishing as it did the effectiveness of a common defense against "animals and the stronger." But what is involved is not a real victory for cooperation, but merely an entering wedge. The first human aggregations come into being almost accidentally. They are not part of a conscious conspiracy on the part of the weak to safeguard themselves from the strong. Once the power of a group of men to defend themselves has been shown, the stronger members of the group will be discouraged from attacking their fellows without provocation; but, on the other hand, the weaker will as yet be disorganized—able to unite in defending one another in an emergency but still without any of the common attitudes which make continuous effectiveness possible. Behavior patterns will thus be modified slightly, but not radically changed. The weak will continue to fear the strong, out of habit; the strong will continue to take precedence over the weak in most matters; and society as a whole will follow the leadership of the strongest and boldest.[19] At the same time, the feelings of group loyalty and amicability awakened by close association and the memory of success achieved in common defense will be present, and can be expected to grow stronger with the passage of time. By placing the rise of kingship at the end of the process by which generally accepted norms of conduct arise, Polybius seems to suggest that, ultimately, the will of the majority is likely to make itself felt against the power of the individual strong man in any social group, but only after the development of common habits and common attitudes has articulated public opinion into an instrument which can be politically effective.

Until that has happened, however, the rule of the stronger is necessary and even beneficial. For, just as fear of other animals first threw men into close

[19] On occasion, there would doubtless be reversions to cannibalism. Cf. Diodorus 1.14.1 (cited above, p. 30) which has the practice end only with the discovery of grain and creation of an adequate food supply.

contact with one another, so common obedience to the stronger would be a cohesive force which incipient patterns of reciprocal behavior could not yet provide.[20]

In a sense, then, primitive monarchy is a sort of chrysalis in which society develops until it is able to function without it. But this development is, inevitably, never completed; government cannot be discarded altogether along with monarchy. There exists a residual set of situations in human life where the system of social sanctions which men practice among one another is ineffective. Common attitudes and the social censure based on them may be of considerable use in restraining aggression and minimizing disagreement, but they need a spokesman. Hence, the fortunate appearance of a man who unites in himself the roles of strong man and benefactor gives rise to a compromise: superior ability and strength is brought into the reciprocal nexus and must act only in response to popular wish, but within these limits exercise of power continues. The result is not only the first true kingship but also the first true *politeia* (compare 5.4 and 7.1).

Our search for traces of a sociological counterpart to the Diodoran and Vitruvian analysis of language has led us rather far afield—to a consideration of what is probably the most satisfactory purely speculative reconstruction of the origin of society ever attempted.[21] We have not, however, encountered any new methodology. The whole system is built upon the same principles as the history of technology examined in Chapters One and Two. Instinctual reactions of pleasure and displeasure, combined with the workings of the utilitarian calculus, produce a series of adaptations suggested by specific incidents—this time arising out of man's social rather than natural

[20] The monarch might be expected to fulfil another function as well. Like the emblem in Diodorus 1.90.1–2, he would serve as a rallying point, an additional symbol of tribal identity. Diodorus himself seems to have some such parallel in mind when he goes on to note (1.90.3) that the Egyptian practice of rewarding benefactors accounts for the divine honors they bestow on their kings as well as for their worship of animals. One wonders naturally whether the kings did not become entitled to rewards in the same way as animals—through their role in the creation of the original human *systêmata*. If so, the parallel with Polybius is close.

[21] Cf. the judgment of a modern sociologist: "a plausible account of social genesis, probably the best offered until the researches of recent ethnologists" (Becker and Barnes, *Social Thought from Lore to Science* 1.199). The brief summary of Polybius' contributions to the history of political and social thought which these authors give (199–200) is, to my knowledge, the best that has appeared. The importance of Book VI has been oddly neglected by classical scholars—more than anything, one suspects, because of a general reluctance among them to take a utilitarian position in ethics seriously (cf., for example, the summary and unfavorable judgments in Mioni [above, note 2] 75, and L. Zancan, "Dottrina delle costituzioni e decadenza politica in Polibio," *RendIstLomb* 69 [1936] 509; and the generally unsympathetic exposition in von Fritz, *Theory of the Mixed Constitution* 45–59). An exception is Ryffel, who rightly sees in these chapters "ein Meisterstück kulturphilosophischen Spekulation" (*METABOΛH ΠOΛITEIΩN* 191, note 351), though he mistakes their fundamental character as Stoic.

environment; and these adaptations sufficiently multiplied result in a radical alteration of a way of life.[22]

Scattered parallels to our five technological texts were pointed out from other ancient authors in Chapter Three; Polybius' analysis of the genealogy of morals is virtually unique.[23] It bears every appearance of being the socio-

[22] To the parallels of detail between Polybius and the texts studied in Chapters One through Four, two more, of less significance, may be added. Vitruvius (Stage 4A, cited above, p. 33) says that the discovery of fire was followed by *conventus*, *concilium*, and *convictus* among men. The last term is an exact translation of *syntrophia*, which may have stood in the original Greek. And the mention, in the corresponding passage of Diodorus (1.14.3), of the role of *timôria* in securing the rule of *dikê* over *hybris* suggests the analogous part played by social censure in Polybius (6.9).

[23] Such parallels to Polybius as can be adduced involve primarily his conception of the role of the monarch and king. The frequency with which early kings appear as the founders of cities has already been noted (above, note 18). A particularly close parallel to Polybius is provided by Aristotle, *Pol.* 3.1285B6–9, which speaks of the first kings as benefactors: either because they led their people in war (cf. the role of the Polybian monarch), or assembled them into a body (again the monarch), or granted land (cf. Polybius 6.7.4, quoted above, note 18). The phrase which Polybius uses to characterize the monarch, *τὸν τῇ σωματικῇ ῥώμῃ καὶ ψυχικῇ τόλμῃ διαφέροντα* (6.5.7), is of a type which was almost formulaic in certain types of ethnological writing; cf. Hecataeus of Abdera, *FGrH* 264F6.3 (the founding of the Jewish nation): *ἡγεῖτο . . . Μωσῆς φρονήσει τε καὶ ἀνδρείᾳ πολὺ διαφέρων. οὗτος δὲ καταλαβόμενος τὴν χώραν . . . πόλεις ἔκτισε*; Euhemerus, *FGrH* 63T4c: *οἱ περιγενόμενοι τῶν ἄλλων ἰσχύι καὶ συνέσει . . . ἀνέπλασαν περὶ αὑτοὺς ὑπερβάλλουσάν τινα καὶ θείαν δύναμιν*; Diodorus 2.38.4: *συνέσει διαφέροντα* (Dionysus in India); 3.70.7: *τῷ κάλλει καὶ ῥώμῃ διάφορον* (Dionysus in Libya); 5.71.1: *διενέγκαι . . . ἀνδρείᾳ καὶ συνέσει . . . διὸ παραλαβόντα τὴν βασιλείαν . . . μέγιστα . . . εὐεργετῆσαι* (Zeus in Crete); Cicero, *Sest.* 91: *qui igitur primi virtute et consilio exstiterunt.* Moreover, early kingship is often associated with the institution of the reign of law: cf. Philochorus, *FGrH* 328F96, and Schol. *ad* Aristoph. *Pl.* 7 (Cecrops); Virgil, *Aen.* 8.321–25 (Saturn); Euhemerus, *FGrH* 63F24, and Diodorus 5.73.7 (Zeus); the last passage mentions among the institutions introduced by Zeus *τὸ κατάρχειν εὐεργεσίας καὶ πάλιν ἀμείβεσθαι ταῖς προσηκούσαις χάρισι τοὺς εὖ ποιήσαντας* (cf. Polybius 6.6.6–7). But all these passages are essentially unlike Polybius in that they do not share his gradualist perspective. There is no hint in any of them of a slow process leading to the social solidarity which makes kingship and the rule of law possible. The primitive rulers whom they mention usually unite in themselves the *rhômê* of the monarch and the *gnômê* of the king; they introduce a new political regime by a virtual *fiat*. Most of the passages cited come from euhemerizing or heuremetistic works of the sort considered earlier (see above, pp. 48–50), and they stand in approximately the same relation to Polybius as do those same works to the technological texts studied in Chapters One and Two. (More often than not, various technological discoveries are included with cities and laws among the achievements of the early kings with which they deal.)

A somewhat closer parallel is provided by Isocrates (*Helen* 32–37). Theseus, observing the dangerous lives led by the autocrats of his day, decides to show that it is possible to rule and still enjoy the comforts of "democracy". So he gathers the citizens into a city and establishes a commonwealth among them. The people, however, entrust him with the task of governing, realizing that his rule will be more reliable and public-spirited than their own. The autocrat-turned-king motif recalls Polybius, and elsewhere (*Panegyricus* 39–40) Isocrates contrasts the reign of *logos* ushered in by the establishment at Athens of the first government with the reign of *bia* which existed in other parts of the Greek world (cf. Polybius 6.6.12). In the event that the theory reproduced in Polybius is as old as the fourth, or late fifth, century, it is conceivable that Isocrates has used it, disturbing the sequence of events it envisioned by his insertion of the tradition which connected Theseus with a democratization of Athenian polity. (For the latter, cf. Euripides, *Suppl.* 352–53; Isocrates, *Panath.* 128; Ps.-Demosthenes, 59.75; Theophrastus, *Char.* 26.6; Aristotle *ap.* Plut. *Thes.* 25.) But the parallel with Isocrates is certainly not sufficient to indicate any widespread familiarity with the theory of social and political origins which Polybius presents.

logical portion of that theory of cultural origins whose linguistic and technological sections appear in Diodorus, Vitruvius, and Lactantius. The technological parts of this tradition have been taken over almost unaltered in the Epicurean texts examined in Chapters One through Three; its sociological doctrines were, I suggest, the starting point for the related, though different, theories of society which appear in Hermarchus and Lucretius; and the influence of this tradition may account for the inclusion of a theory of linguistic origins in the canonical Epicurean *Kulturgeschichte*—though this aspect of Epicurean doctrine is, considered in itself, an essentially original creation.

Two further pieces of evidence should be mentioned here, for they bring important confirmation to the conclusion just reached. A portion of Polybius' account, his description of early monarchy, has a clear parallel in one of the technological texts discussed in Chapter Two, Posidonius' account of the primitive rule of *sapientes*:

> sed primi mortalium quique ex his geniti naturam incorruptam sequebantur, eundem habebant et ducem et legem, commissi melioris arbitrio. naturae est enim potioribus deteriora summittere. mutis quidem gregibus aut maxima corpora praesunt aut vehementissima. non praecedit armenta degener taurus sed qui magnitudine ac toris ceteros mares vicit; elephantorum gregem excellentissimus ducit; inter homines pro summo est optimus. (Seneca, *Ep.* 90.4–5)

> *ἀνάγκη τὸν τῇ σωματικῇ ῥώμῃ καὶ τῇ ψυχικῇ τόλμῃ διαφέροντα τοῦτον ἡγεῖσθαι καὶ κρατεῖν, καθάπερ καὶ ἐπὶ τῶν ἄλλων γενῶν ἀδοξοποιήτων ζώων θεωρούμενον τοῦτο χρὴ φύσεως ἔργον ἀληθινώτατον νομίζειν παρ' οἷς ὁμολογουμένως τοὺς ἰσχυροτάτους ὁρῶμεν ἡγουμένους, λέγω δὲ ταύρους ἀλεκτρυόνας τὰ τούτοις παραπλήσια. . . .* (Polybius 6.5.7–8)

Posidonius differs from Polybius in that he refers to rule of the better rather than rule of the stronger, for the *potiores* mentioned here are those same *sapientes* to whom he ascribes a major role in the development of technology. If, as seems likely, the parallel between Polybius and Posidonius indicates use of a common source,[24] it is doubtless Posidonius rather than Polybius who is innovating at this point.[25] For the *sapientes* here serve exactly the same

[24] I. Heinemann, *Poseidonios' metaphysische Schriften* 1.91, believes that Posidonius' account of early man is simply a revision and correction of what appeared in Polybius. But the notion of a group of men qualified by their natural superiority for rule and responsible for raising the race from its primitive helplessness through technological discoveries antedates both Posidonius and Polybius; so much is clear from the parallels to it found in euhemerizing texts (see preceding note). It is far more likely that Posidonius is drawing on this tradition than that he is combining Polybius with a separate, technological source.

[25] Innovation is almost certainly involved, since the animal examples adduced by Posidonius indicate only that rule of the stronger—not rule of the better—is *kata physin*. We are thus justified in assuming a more specific source for the present passage than the general Stoic maxim, *τὸ κρεῖσσον ἀεὶ*

purpose as they did in the technological portions of Posidonius' narrative: the accommodation of a naturalistic treatment within a teleological framework (see above, pp. 53–54). By interpreting the observed behavior of herd animals as a voluntary submission to the "best" (a superficially easy change if we posit a common source which spoke simply of *archê tou kreittonos* as *kata physin*) Posidonius is able to support with biological evidence of a sort his effort to find a purposeful tendency toward perfection even in the earliest and most "natural" phase of human existence. In similar fashion the combination of accident and ingenuity by which Diodorus, Vitruvius, and Lucretius account for the growth of technology was made into the gradual unfolding, through chosen agents, of man's exalted destiny. The two parts of Posidonius' account—technological and political—have arisen through the application of similar modifications to similar naturalistic doctrines; it is hard to believe that those doctrines were not once part of a single tradition, faithfully preserved in its sociological aspects by Polybius and in its technological ones by Diodorus, Vitruvius, and Lucretius. And this conclusion is thoroughly in keeping with what our entire chapter has suggested about the relationship between the Polybian and Epicurean genealogy of morals.

Also in keeping with the argument of this chapter are the conclusions to which the second piece of additional evidence mentioned above points. But the account in which this evidence appears is so extensive that it must be considered in a separate chapter.

περιγινέσθω τοῦ χείρονος (so Blankert, *Seneca ep.* 90, pp. 30–31, calling attention to Epictetus 1.29.9 and Seneca, *Ep.* 65.24; cf. also *SVF* 1.228). Seneca, *De clem.* 1.19.2, also cited by Blankert, is rather different: there the "natural" character of kingship is established by the valid parallel of the *Bienenstaat.*

CHAPTER SEVEN

A FOURTH CENTURY VERSION OF PREHISTORY (*LAWS* III)

We have already had occasion (above, p. 54) to mention the third book of Plato's *Laws* and to note the differences between its view of prehistory and that which appears in the five texts examined in Chapters One and Two. A basic difference in point of view does not, however, exclude the possibility of extensive similarity in detail. At a number of points *Laws* III recalls Polybius, Diodorus, and Lucretius so closely as to suggest that the resemblance is not accidental. Before considering the relationship, however, something further must be said about the general character of Plato's whole conception of prehistory.

The *Kulturgeschichte* of *Laws* III has been analyzed, correctly I believe, as a conflation of two different points of view into a single account.[1] The heterogeneous character of the work is best illustrated by a summary which makes an approximate separation of its two "strata":

A	B
	1 Through cataclysms, plagues, or other causes the human race has been periodically destroyed—with the exception of a few herdsmen living in the mountains,
	2 scattered and without any knowledge of technology
or of the devices which serve greed and competition in cities (677AB).	3
	4 At first men lived in solitude, gaining a bare livelihood from their scant flocks. There were no cities or laws;
	5 men were incomplete both as regards good and evil (677E–78A).
	6 As men grew more numerous the present order of things gradually arose (678B).
But for a long time men still feared to descend into the plains and so lived a solitary mountain existence. Friendship and helpfulness characterized their relationship with one another—for	7

[1] See Sikes, *Anthropology of the Greeks* 41; Uxkull-Gyllenband, 28–30; and Havelock, 45–50.

A		B
solitude made them glad to see each other when they met, they were not numerous enough to create a shortage of food, and the loss of all technology requiring the use of metals had removed the means of waging war. The arts of weaving and pottery were retained from the era before the cataclysm and sufficed for man's needs. The absence of wealth and poverty removed the causes of envy and greed and made men more virtuous. They were too innocent as yet to question received ideas about things human and divine. They were more just, more valiant, and more disciplined than the men of today (678B–79E).		
They needed no laws or lawgivers but lived in families or clans, observing the patriarchal principle that the eldest shall rule (680A).	8	
	9	(This mode of existence is known as *dynasteia.*) (680B)
	10	Thus, like birds, they lived in flocks,
enjoying ancestral laws and the justest of all kingships (680DE).	11	
	12	Later, men banded together into larger groups, turned to farming and built walls to protect themselves from the wild beasts (680E–81A).
	13	The formation of larger aggregations brought about the mingling of different sets of customs (681AB);
	14	hence it became necessary to appoint lawgivers to reconcile them. The latter produced a code of laws
	15	and replaced the existing *dynasteia* with kingship or aristocracy (681CD).
A third stage of development, in which all manner and misfortune (*pathêma*) of government arose, came into being when men for the first time ventured into the plains	16	
	17	and established cities (681D–82C).
	18	Later a new type of organization arose: the *ethnos*, formed by an alliance between cities (682D–83A).

Of the two different conceptions of history present here, one may be called "progressive" (column B), the other "regressive," or at least "static" (A). The former sees human nature as evolving over a long period, during which technology and social institutions come into being and during which man is transformed through their influence from a helpless brute into a creature cap-

able of securing and preserving for himself the blessings of civilization. The latter holds that it was only the absence of philosophical wisdom which kept human nature from existing complete and perfect in primitive man.[2] The technology and social institutions developed by his descendants have not altered man's nature substantially, and such change as they have produced is largely for the worse.

Elements of these two conceptions are perhaps compatible with one another and could have had their origin as parts of a single, coherent picture of early man. It would be fairly easy, for example, to adopt the progressive perspective in analyzing the technological aspects of civilization and the static one in dealing with its moral and social qualities.[3] Two considerations, however, indicate that what we have in *Laws* III is not an original, coherent picture of this sort. What has been called the progressive view appears in Greek literature as early as the *Prometheus Bound* and is also found (with the important reservations discussed above, pp. 52–53) in the three works which Plato wrote immediately before the *Laws*: the *Politicus*, the *Timaeus*, and the *Critias*. It is reasonable to assume, then, that it was taken over by Plato from earlier thought; and that the opposing view (column A), which appears for the first time in Greek literature here,[4] was original with him. Moreover, though some sort of logical compromise between the two views may be possible, it is not to be found in our present text. All the items given above under B refer to the various stages of a steady evolution: the first men are scattered nomads without any knowledge of technology; in the course of time, like other animals, they form aggregations; they turn to agriculture and take measures to protect themselves from the wild beasts; larger aggregations arise and with them the beginnings of law and government; finally, men begin to build cities. But these successive phases in the development of culture are not presented by Plato as part of any causal sequence. He does not tell us why clans band together into larger aggregations; why, in the middle of the whole process, men begin to protect themselves against wild beasts, which evidently had not bothered them before; why they turn to agriculture and eventually descend into the plains to build cities. All these events have an explanation if seen against the background of an evolutionary theory of culture: they represent successive attempts on man's part to gain for himself greater comfort and security. But Plato has been at some pains to

[2] Cf. 679E, where (as Havelock notes, 49), of the four Platonic virtues, only *phronêsis* is lacking in the characterization of early man as braver, more just, and more disciplined than his descendants.

[3] This is essentially the procedure followed by the Cynics in their accounts of early man (see below, pp. 149–51).

[4] The notion that the men of old were better and "nearer the gods" was, of course, traditional; but it is first associated with "cultural" primitivism (for this term, see Introduction, note 4) in the passage under consideration.

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prove, by the items given under column A, that man in his primitive condition had enough to satisfy all his legitimate needs. Forgetting the bare livelihood and scant flocks of 677E (B4), he declares that there was no shortage of food (A7). Not having the means of waging war, men lived amicably with one another; society was complete with "the justest of all kingships," so that subsequent political arrangements are merely larger versions of the same thing; and law is nothing more than an attempt to reconcile conflicting patriarchal traditions when they happen to conflict. It would, of course, have been possible to suggest why the primitive utopia did not last; but Plato does not attempt to do so. He merely asserts that certain changes occur—changes which are explicable on the basis of the view of primitive society found in column B, but quite without motivation on the basis of that found in A.

The above analysis, as well as what it suggests about the presence of *contaminatio* in *Laws* III, can be supported by a comparison of Plato with Polybius; for almost every item in column B reappears, in identical order, in Book VI of the *Histories*:

Polybius VI		Plato	
initial cataclysm;[5]	5.5	initial cataclysm;	1
loss of technology	5.6	loss of technology;	2
and social usages (*epitêdeumata*);	5.6	men live scattered and without laws;	4
men become more numerous,	5.6	they become more numerous,	6
under leadership of the strongest and boldest (*monarchia*);	5.7	under leadership of a patriarch (*dynasteia*),	9
they live in herds;	5.7	living in flocks;	10
		larger aggregations, fortifications, and agriculture arise;	12–13
creation of generally accepted ideas of right and wrong,	6.2–9	creation of a code of *nomoi*,	14
followed by kings	6.12	then kings	15
and cities.	7.4	and cities.	17

[5] It is usually assumed that the theory of recurrent cataclysms is a Platonic innovation in Greek *Kulturentstehungslehre* (e.g. by Reinhardt, 507–8; Uxkull-Gyllenband, 29; F. Solmsen, *Aristotle's System of the Physical World* [Ithaca 1960] 431); and if this is so, Polybius is in agreement with the A stratum rather than the B stratum in Plato's account at this point. But the evidence is not conclusive. The theory is certainly essential to Plato's purpose. It accounts for the elements of civilized life which he wishes to give to his nomads: domesticated animals, weaving, pottery, architecture (cf. the houses and beds of 679A), and a language and religion (inasmuch as the things told "about gods and men" are readily believed, 679BC); these are holdovers from an earlier era. At the same time, the theory allows Plato to suggest that what he is describing is a genuine state of nature: the life which the race lives when it has been stripped of the accretions (greed, competitiveness, a critical spirit, and the like) which society and civilization have brought to its real character. Aristotle and his successors were to find the theory equally useful: it fitted in well with the former's theory of the perpetual rediscovery of philosophic truths (W. Jaeger, *Aristotle*[2] [Eng. transl. Oxford 1948] 130–38) and enabled the Peripatetics to reconcile their doctrine of the eternity of man with

Of the "progressive" items in Plato's account only 12–13 have no counterpart in Polybius, and their absence is easily explained as a result of the latter's exclusively sociological perspective. It is clear that the two texts did not come into being independently of each other—hence the suggestion, often advanced, that Plato is a partial source for Polybius.[6] If so, the latter's success in extracting from Plato's account all those items—and only those—which fit his own radically different conception of prehistory is most remarkable. It seems far more likely that both works reflect the influence of an identical source, one which is reproduced fairly faithfully by Polybius, but which Plato has subjected to extensive interpolation.[7]

Strong support for this interpretation is provided by the terminology

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evidence from history and tradition suggesting that human culture was of relatively recent origin (Bignone, *L' Aristotele perduto* 2.461–73). But a theory need not originate where it proves eventually to be most useful. The doctrine of recurring cataclysms appears first in the *Timaeus* and *Critias* (see the parallel passages assembled by R. Walzer, *Aristotelis Dialogorum Fragmenta* [Florence 1934] 70–71), where it serves the very different purpose of explaining why Egyptian records and tradition reach back so much farther than their Greek counterparts. The fact had attracted attention as early as Hecataeus and Herodotus (2.143=*FGrH* 1F300), and need not have waited until Plato's day to find an explanation. (The idea of a general cataclysm which failed to reach Egypt is perhaps implied in the same passage of Herodotus: 2.142.4.) It is possible, for example, that the atomistic analogy between physical and social *kosmoi* (see below, pp. 107–10) led to the suggestion that the latter, like the former, are innumerable and mortal (cf. the μυρίαι ἐπὶ μυρίαις πόλεις of *Laws* 676B). Though most—perhaps all—of the pre-Socratics posited an original spontaneous generation of men from mud and water (cf. *VS* 12A30; 21B33; 68A139) and an eventual destruction of both man and his cosmos, these theories would not exclude the possibility of the intervening partial *phthorai* which Plato describes. The myths of floods associated with the names of Deucalion, Dardanus, and Ogygus, or the belief that spontaneous generation was possible only at the time of the formation of the whole *kosmos* (cf. Diodorus 1.7) would have favored the idea that the *phthora* which accounts for the recentness of civilization in Greece was partial rather than total. (A single account could, of course, have allowed for either possibility: cf. *Laws* 781E–82A; Aristotle, *Pol.* 2.1269A4–5.) There is thus some grounds for accepting Jaeger's contention (*Aristotle*, 137) that the idea of recurring cataclysms "cannot have originated in Plato's imaginative brain," but rather "bears the stamp of Ionian science."

[6] Direct or indirect influence of *Laws* III on Polybius is assumed by R. von Scala, *Die Studien des Polybios* (Stuttgart 1890) 108–13; Wilamowitz, *Griechisches Lesebuch* II, i (Berlin 1902) 120; E. Mioni, *Polibio* (Padua 1949) 66; and von Fritz, *Theory of the Mixed Constitution* 417, note 34.

[7] Even if the idea of recurrent, partial cataclysms is a Platonic innovation (see above, note 5), its presence in Polybius does not tell against the theory of a common source for both accounts. Polybius' cyclical theory of political change demanded an account which commenced, not with an absolute beginning, but the return of something which had existed many times before; hence he would have had reasons of his own for replacing the pre-Socratic idea of the continuity of matter through a total cataclysm with the Platonic one of the continuity of the human race through a partial one. (For what is perhaps an echo of the former idea in his text, see Guthrie, *In the Beginning* 66.) And his source for the latter notion need not have been Plato. It appears in certain second century writers ("Ocellus Lucanus," Critolaus) along with an account of the process of *genesis*, *akmê*, and *phthora* evident in all earthly things which closely recalls Polybius' own view of the biological law operative in the history of states (see Ryffel, *ΜΕΤΑΒΟΛΗ ΠΟΛΙΤΕΙΩΝ* 203–21; W. Theiler, "Schichten im 6. Buch des Polybios," *Hermes* 81 [1953] 296–97).

which Plato uses in referring to the patriarchal societies which preceded the first kingdom. Rule of the eldest is called *dynasteia*. This is an unparalleled use of a word which in other contexts always means rule by force,[8] usually that of a narrow oligarchy, but in two instances at least (Isocrates, *Paneg.* 39, *Panath.* 121) the primitive rule of force which preceded the establishment of government by law—Polybian *monarchia* in other words.[9] One must conclude that Plato and Polybius have drawn on a common source which spoke of primitive *dynasteia* followed by kingship. Polybius preserves the concept but uses a different term, *monarchia*;[10] Plato keeps the term but applies it to a completely different situation. And having altered the character of *dynasteia* he is forced to introduce a further change. The institution of kingship can no longer be regarded as the substitution of *ius* for *vis*. The new arrangement is preceded in his account, as in Polybius', by the creation of a set of norms by which society is to live; but they are the codification of the *nomothetai* who bring kingship into being, rather than the commonly accepted notions of right and wrong whose formation is described in Polybius 6.6.[11]

We are in a position to say more about Plato's source than that it was the one also used by Polybius. It treated technology as well as society, and in much the same way as did the tradition discussed in Chapter Two. The agriculture and fortifications of item 12 are paralleled there (Stages 5E and

[8] For a collection of examples, see Aalders, *Mnemosyne* Ser. 4, 3.304, note 10; K. Stegmann von Pritzwald, "Zur Geschichte der Herrscherbezeichnungen von Homer bis Platon," *Forschungen zur Völkerpsychologie und Soziologie* 7 (1930) 120–21, 155–56. The fact has been noted by most commentators (cf. R. Weil, *L' "archéologie" de Platon* 68–69; and the notes to 680B in Taylor's translation and in the commentaries of Ritter and England). To my knowledge, however, no satisfactory explanation has been offered. Cf. England: "The important point . . . seems to have been the fact that *authority* (*dynasteia*) should attach to any position; hence the term chosen;" Weil: "La méthode de Platon manque ici de rigueur;" and G. Rohr, *Platons Stellung zur Geschichte* (Berlin 1932) 13: "In diesem Abschnitt ist allerdings Platon in der Namengebung besonders ungebunden."

[9] Polybius himself, it should be noted, speaks of the people who willingly obey the strong man who serves their interest as protecting his *dynasteia* (6.6.11). Also significant is the way the account of *monarchia* recalls Diodorus' description of the Trogodytes (3.32). The latter are ruled despotically *kata systêmata* (3.32.1—cf. Polybius 6.5.10), and their leaders are twice referred to as *dynastai* (32.1, 3).

[10] Polybius' use of the term *monarchia* is just as peculiar and isolated as Plato's use of *dynasteia*. Nowhere else does it bear the specialized significance it has in Book VI (F. M. Walbank, "Polybius on the Roman Constitution," *CQ* 37 [1943] 79). It was substituted for the *dynasteia* which must have appeared in the historian's source in order to accommodate the *Kulturgeschichte* of 5.10–6.9 to the theory of the evolution of political constitutions in which it is imbedded. Polybius regards the rise of culture (somewhat inaccurately) as the "natural genesis of kingship" (cf. 7.1). It is succeeded by the acme and decay of this institution, then by the genesis, acme, and decay of aristocracy and democracy. *Monarchia* emphasizes more clearly than *dynasteia* the place which this process is supposed to occupy in the tripartite political cycle. See, further, Cole, *Historia* 13.460–61.

[11] The role of the *nomothetês* in the coalescing of clans may be a motif which appeared in Plato's source (see below, pp. 108–9), but the role is here greatly extended. In the process Plato exactly reverses normal Greek ideas by making the king the product, rather than the source, of the earliest *nomothesia*.

8A). And column A, though containing Plato's own additions to his source, has three items which read like a polemic against the views of our five technological texts. Plato asserts, as if contradicting Lucretius (5.1350–53, quoted under Stage 5D), that weaving does not depend on iron tools and is retained by man at all periods of his history;[12] he draws the same connection as do Diodorus and Lucretius (passages quoted under Stage 5C) between metallurgy and warfare, only inferring from this that primitive man was better off without both; and his emphasis on the sociability of primitive man is perhaps directed against the theory of an original cannibalism which appears in Diodorus (1.14.1, Stage 3D; cf. above, p. 30).[13]

The view here advanced, that Plato is modifying and at the same time conducting a polemic against the view of primitive man which appeared in our tradition, gains support from *Epinomis* 974E–76C (on which see also above, Chap. III, note 16). In the course of an attempt to establish the nature of true (philosophical) wisdom the author of that treatise gives a brief resumé of all those achievements and qualities of mind which might, at one time, have earned for their possessors the name of *sophos*, but which are no longer, in his view, sufficient to do so. The achievements rejected are just the ones which would figure in a history of culture and are presented in what seems to be roughly chronological order. The men who first freed the race from the curse of cannibalism and discovered the preparation and cultivation of grain are not, properly speaking, *sophoi*; neither are those responsible for the first houses and for metallurgy and the tools used in building, pottery, and weaving; nor are the inventors of the arts of hunting and divination; nor the discoverers of the mimetic arts—music, dancing, and singing; nor the founders of medicine, navigation, and jurisprudence. Finally, facility in remembering what is taught and calling to mind what is appropriate in any given situation is *anchinoia* perhaps, but not *sophia*.

Here we have in explicit form the theory of man's original cannibalistic

[12] The parallel with Lucretius 5.1350–53 was noted by Uxkull-Gyllenband, 34, note 46.

[13] Plato was certainly acquainted with such theories. Cf. *Politicus* 271DE, where cannibalism is named along with wars and factions as something absent under the rule of the Divine Shepherd—hence, presumably, characteristic of the present world cycle, or at least portions of it. And it is mentioned in *Laws* 6.782B as a mode of *trophê* to which man, in common with other animals, once had recourse. The latter passage occurs in an anthropological context which shows several points of similarity with Book III:

III (676BC)

ἀφ' οὗ πόλεις τ' εἰσὶν καὶ ἄνθρωποι πολιτευόμενοι δοκεῖς ἄν ποτε κατανοῆσαι χρόνου πλῆθος ὅσον γέγονεν; μυρίαι . . . ἐπὶ μυρίαις . . . γεγόνασι πόλεις . . . οὐκ ἐλάττους ἐφθαρμέναι . . . πεπολιτευμέναι δ' αὖ πάσας πολιτείας πολλάκις ἑκαστοχοῦ. . . .

VI (781E–82A)

χρὴ . . . συννοεῖν ὡς ἡ τῶν ἀνθρώπων γένεσις ἢ ἀρχὴν οὐδεμίαν εἴληχεν . . . ἢ μῆκός τι τῆς ἀρχῆς ἀφ' οὗ γέγονεν ἀμήχανον ἂν χρόνου ὅσον γεγονὸς ἂν εἴη. πόλεως συστάσεις καὶ φθοράς, καὶ ἐπιτηδεύματα παντοῖα τάξεώς τε καὶ ἀταξίας . . . οὐκ οἰόμεθα γεγονέναι;

nature which was rejected by implication in the *Laws*; and implied here is the connection between metallurgy and the arts of weaving and pottery explicitly rejected there. In both points the *Epinomis* agrees with the tradition examined in Chapters One through Four. Nor do the similarities end here. Both the *Epinomis* and the texts of our tradition connect the end of cannibalism with the discovery of grain (Diodorus 1.14.1, Stage 3D);[14] both discuss the "fine" arts after the necessary ones (the *Epinomis* drawing an explicit distinction between *τῶν ἀναγκαίων κτῆσιν* and *παιδιά*—975CD); and the *anchinoia* which Diodorus mentions (1.8.9, Stage 6) alongside hands and rational speech as bringing about the development of technology reappears in the *Epinomis* as a suggested designation for an intellectual process in man which falls short of *sophia*.[15] Finally, the passage recalls Polybius in its inclusion of the general and orator among practitioners of the lower forms of *sophia* (975E–76B). Both belong to a more advanced stage of culture than that described by Polybius, but their activities (described as *boêtheiai*) have close parallels in the latter's account. The general is a *boêthos* for the whole city, like the man who undertakes the defense of all in moments of danger (6.6.8); and the orators (described as *βοηθοὶ δίκαις*[16] *ἐν τῇ τοῦ λέγειν ῥώμῃ*) have a role analogous to that of the future king who "lends his support" to popular ideas of right and wrong.[17]

Both *Laws* III and the *Epinomis* are in turn linked to the young Aristotle's account of the antecedents of philosophy (see above, pp. 52–53) by similarities which show that all three must have had a common origin in the discussions of the Academy held in the mid-fourth century. Though the methods they employ are different, the three accounts have a single aim: the downgrading of the achievements of technology and the useful arts. Plato attempts to show that, insofar as they represent real achievements, these arts are only a mixed blessing, and that the really useful and necessary among them are not achievements at all, but something which the race has enjoyed from time immemorial. The *Epinomis* recognizes the utility of technology and the talents of its creators but denies that these talents have anything to do

[14] The same connection is drawn in *Laws* 6.782B.

[15] On the similarity of the *Epinomis* to the technological texts discussed in Chapters One and Two see also Gerhäusser, *Der Protreptikos des Poseidonios* 30–31, who suggests the possibility of Democritus as the ultimate common source.

[16] For the notion of *boêtheia* rendered to *nomos* or *to dikaion* cf. Antiphon 1.31, *Herod.* 80, Lysias 10.32; Anonymus Iamblichi 3.6; Aristophanes, *Plutus* 914–15; Demosthenes 56.15; and the passages cited in A. Delatte, *Essai sur la politique pythagoricienne* (Liège 1922) 49.

[17] Even the word *boêtheia*, designating in origin a running (*thein*) in response to the raising of the hue and cry (*boê*)—see W. Schulze, "Beiträge zur Wort- und Sittengeschichte II," *Kleine Schriften* (Göttingen 1933) 183–89—suggests the most primitive form of mutual succor and, in particular, the situations envisioned by the texts on the origin of language discussed in Chapter Four (above, pp. 63–67, with note 15).

with wisdom in its highest form. Aristotle, more generous, gives to technology a preparatory but still subordinate place in man's intellectual development. That all three critiques should be presented in the form of *Kulturgeschichten* which are so similar to each other suggests that what all three are attacking is not simply a general attitude but a specific work or body of works in which both *dêmiourgikê* and *politikê technê* were glorified by a careful and detailed account of their civilizing achievements.[18] Plato denies in large portion the truth of this account; Aristotle and the author of the *Epinomis* accept it, but compensate by emphasizing the essentially subsidiary character of the achievements it celebrates. It is natural to assume that it is their common derivation from this work or body of works which explains the similarities between the *Laws*, the *Epinomis*, the accounts of technology and language considered in Chapters One through Four, and the sociology of Polybius VI.[19]

If the above argument is correct, the *Laws* and the *Epinomis* contain independent evidence for accepting the conclusion reached in our two preceding chapters—that the genealogy of social norms given by Polybius and the closely related histories of technology found in Diodorus, Vitruvius, and Lucretius did not arise independently. Plato's evidence is also of some importance for the identification of the ultimate source of the tradition we are examining. The middle of the fourth century may now be accepted as a *terminus ante quem* for the origin of the tradition in both its technological and sociological phases. We are dealing, therefore, with a doctrine which is pre-Hellenistic and, in all probability, pre-Platonic. The argument, plausible in itself (see above, p. 59), for positing some source nearer in time to the first century accounts examined in Chapters One through Three is thereby shown to be invalid; and with this argument goes the main objection to the

[18] Recognition of such an overall indebtedness to pre-Platonic thought need not affect the validity of the theories advanced by other investigators on the connection between the *Epinomis* and the early works of Aristotle. In particular, Einarson may be right (*TAPA* 67.283, note 75) in seeing in the catalogue of *technai* of *Epinomis* 974E–76C a conflation of Aristotle's classification of the arts with the procedure adopted in the *Euthydemus* for determining whether certain professions can be regarded as *epistêmai* (cf. 289A–90B, where the claims of *iatrikê*, *stratêgikê*, and *rhêtorikê* are examined and rejected). But such formulations are incomplete. There is, for example, no parallel in either Aristotle or the *Euthydemus* to the conceptions of *boêtheia* and *anchinoia* which appear in the *Epinomis*; and the reference in 975A to man's original cannibalism contradicts Asclepius' version (see above, Chap. III, note 15) of Aristotle's views on primitive life: ἦσαν πατέρες μετὰ τέκνων . . . καὶ οὐκ ἦν ἐν αὐτοῖς ἀδικία (11.7–9 Hayduck).

[19] Though briefer than some of the texts studied in Chapters One and Two, *Epinomis* 974E–76C may preserve at one point a more faithful record of the tradition. It includes *mantikê* among the useful arts (975C). Though omitted as a rule from Hellenistic *Kulturentstehungslehren*, augury and divination are listed among the civilizing achievements of Prometheus by Aeschylus (*PV* 484–99), and their institution is assigned by Democritus, perhaps in an anthropological context, to the "men of old" (A138).

alternate theory—supported by much of the evidence examined in those chapters—of a Democritean source.

Our comparison of Plato and Polybius has not thus far produced any positive evidence for this alternate assumption, yet such evidence is not lacking. When the two accounts are considered in conjunction with some of the basic principles of Democritus' whole atomistic system, as well as with certain specific statements found in his fragments, the case for a Democritean origin becomes, as we shall attempt to demonstrate, very strong indeed.[20]

[20] One bit of evidence is best mentioned here, since, unlike those to be examined in the next chapter, it has nothing to do with our authors' social and political theories. Aristotle's rejection of the authenticity of the works attributed to Orpheus (*De philosophia* Fr. 7 Ross) is perhaps to be understood as part of his general critique of Democritus' theory of culture. For we know that the latter ascribed the discovery of the hexameter to Musaeus (B16—see above, p. 57), from which it is natural to infer that he believed the poems of the Thracian school of bards to be authentic.

CHAPTER EIGHT

PLATO, POLYBIUS, AND DEMOCRITUS

1. The Genesis and Expansion of *kosmoi*

The course of social development described in the third book of the *Laws* is characterized by the formation of successively larger social aggregations, beginning with the family and progressing through clan, city, and confederation (see in the summary given above, pp. 97–98, items 8, 12, 13, 16, and 18). This aspect of Plato's account has some bearing on the source problem we are considering, for it recalls a central tenet of atomistic physics. Democritus derived the entire universe from the concourse of atoms into aggregations or "orderings" (*kosmoi*) and believed all of these *kosmoi* to be characterized by a tendency to become progressively larger (A40). He also seems to have given to the word *kosmos* a wider range of meaning than did non-atomistic writers. It designated aggregations of living things as well as of atoms,[1] and there is no reason to believe that these human and animal *kosmoi* would have been regarded as exempt from the general tendency to expand. If they were not so regarded, Plato's account of the gradual progression from family to *ethnos* may be the result of the application of atomistic principles to sociology.

This suggestion is not new. The "atomistic" affinities of the doctrine of *Laws* III have been pointed out before and taken as sufficient indication in themselves of strong Democritean influence.[2] The suggestion is attractive and fits in well with evidence suggesting that Platonic physics, in the philosopher's later years, underwent a similar Democritean influence.[3] Yet for the present, at any rate, it must be accepted tentatively and with reservations. The division of cities into tribes and phratries and the association of these cities into ethnic leagues and alliances was a simple fact of Greek social and political life, of which a contemporary observer could hardly be ignorant.

[1] Cf. B258–59. There is also an implicit link between animate and inanimate *kosmoi* in B164 (see below, p. 110), where both are said to illustrate by their behavior the principle that like is attracted to like.

[2] See Uxkull-Gyllenband, 29–30. Democritean influence is denied by Aalders (*Het derde boek van Plato's Leges* 98–100, 111–15); but he fails to consider the allegedly atomistic motifs which provide Uxkull-Gyllenband with the substance of his argument.

[3] See the works cited in *VS* II 82.38n.; W. Schmid, *Geschichte der griechischen Literatur* 5 (Munich 1948) 331–32; and H. Cherniss, "Plato, 1950–57," *Lustrum* 4 (1959) 39–40.

It would have been a natural assumption, requiring no background of atomistic theory to support it, that the family, which was the smallest of these units and the basic component of all the others, was also the earliest to come into being; that it had, therefore, existed separately at one time; and that gradual accretions had produced social units of the dimensions with which the Greeks of more recent times were familiar. Moreover, though there is a certain similarity between the development of *ethnê* as described by Plato and that of Democritean *kosmoi*, the single family living in isolation is a far cry from the much larger, more turbulent δῖνον παντοίων εἰδέων (B167) which is separated out from the all at a corresponding point in the atomistic theory of cosmic genesis.

Taken by itself, therefore, Plato's account offers no sure support for the theory of a Democritean source. The same cannot be said, however, once his account has been examined alongside certain other passages in the tradition to which it, along with Polybius and the technological texts studied in Chapters One and Two, seems to belong. The eighth chapter of Diodorus I, for example, posits, just as Plato does, a social development which proceeds through the gradual expansion of an original nucleus.[4] In 1.8.4 (cf. above, pp. 64–65) the original *systêmata* constituted out of the speakers of a single language are said to become the ancestors of the *ethnê* of the world. Even more significant is the passage in the Egyptian portion of the book (1.16.1) which lists among the achievements of Hermes the articulation of a common speech and the devising of names for certain *anônyma*. The passage has been taken as a simple variant on the earlier account of the origin of language (1.8.2–4), but upon closer examination it becomes fairly clear that Diodorus is here describing something quite different. Hermes cannot be the original *onomatothetês*; for at a completely prelingual stage of development, the creation of a common language would be identical with the discovery of names for *anônyma*, and so there would be no point in distinguishing, as Diodorus does, between the two activities. Moreover, at this stage all objects would be nameless, so that there would be equally little point in referring to those which receive names as *anônyma* rather than simply as *pragmata*. What Hermes must be doing is, first, creating a *lingua franca* (ἡ κοινὴ διάλεκτος) for a country which already possesses dialects (rudimentary perhaps) spoken locally by its different tribes; and, second, devising names for some of the *anônyma*[5] for which no designation, local or otherwise, yet exists. Diodorus' account has an exact parallel in *Laws* 3.681A–C (item 14 in the summary given in Chapter Seven).[6] Plato there says that, as the separate clans began

[4] On the following cf. Uxkull-Gyllenband, 29–30.

[5] Cf. *nônyma* in the Democritean analysis of language, above, pp. 67–69.

[6] Noted by Reinhardt, 507.

to coalesce, they brought with them different and often conflicting customs. As a result it was necessary to appoint lawgivers who would pick and choose from among a variety of *nomoi* those which would henceforth have sole validity.[7] Diodorus speaks of language, Plato of *nomoi*; but, as we have seen, it is characteristic of the whole tradition of *Kulturgeschichte* which we are examining to draw a close connection between the common speech and the common social usages prevalent among a given people (see above, pp. 71–74, 85–86). And it should be noted that the linguistic equivalents for the conflicting *nomoi* mentioned by Plato would be synonyms and homonyms, those examples of differing conventional responses to identical *pragmata* and identical responses to different *pragmata* of which Democritus took special account (see above, pp. 67–69) in framing his theory of the conventional origin of language, perhaps seeing in the coalescing of different linguistic *systêmata* their principal point of origin.

These parallels between Plato, Diodorus, and Democritus are important for three reasons. First, they indicate that the motif which has been regarded as atomistic in Plato's account belongs to the tradition which he and Diodorus are following, hence cannot be an addition of Plato's own to which there was no counterpart in that tradition. Second, it allows us to supplement the rather shakily grounded argument from the "atomistic" character of *Laws* III with a specific parallel to Democritus. Finally, it suggests that the notion of an expanding social group, though not, in all probability, original with Plato, may nevertheless have undergone certain modifications at his hands. The initial aggregation in Diodorus' account is not a family but a *systêma*—a group of individuals (or householders) who assemble together for protection against the wild animals. The resulting picture of social genesis provides a far closer parallel than does Plato's to what can be reconstructed of the Democritean theory of the formation and development of *kosmoi*. A *kosmos*, according to one testimony (A40.4), grows and flourishes until it can no longer absorb matter from outside. Elsewhere in the same passage another possible cause of destruction is suggested: a *kosmos* may come to an end by colliding with another one. The collocation of the two causes suggests that Democritus had in mind a situation in which they would have been identical or nearly so, such as that in which warring *kosmoi* compete with one another for the available atoms. Under these circumstances absorption of new matter will always mean incorporation of part of another *kosmos* into one's own,[8]

[7] The source drawn upon by Plato and Diodorus need not have attributed the whole process to a single man. An indication of the skill shown by certain individuals (perhaps equivalent to the *logioi* of Democritus) in suggesting solutions and compromises in specific situations would have been a sufficient starting point for the more thoroughly individualistic interpretation given by Plato and Diodorus.

[8] Cf. *VS* 68A84: *φθείρεσθαι τὸν κόσμον τοῦ μείζονος τὸν μικρότερον νικῶντος.*

failure to absorb will mean collision and destruction. It is exactly such a situation which, both in Diodorus and in Polybius' closely similar account, creates the first human aggregation. Man must, to begin with, build a world of his own by creating safe surroundings for himself in the midst of the various natural and animal *kosmoi* with which he finds himself in contact; and he can only survive by turning portions of his environment, whether animate or inanimate, to his own use—i.e. by incorporating portions of other *kosmoi* into his own.[9]

The view of social genesis found in Polybius and Diodorus is thus perfectly consistent, as Plato's is not, with what one would assume an atomistic account of this process to have been. There is, moreover, one specific piece of evidence to suggest that Democritus did in fact offer such an account, and that it is echoed in Polybius:

Polybius 6.5.7–8	Democritus B164
τότε δήπου καθάπερ ἐπὶ τῶν ἄλλων ζῴων καὶ ἐπὶ τούτων συναθροιζομένων—ὅπερ εἰκός, καὶ τούτους εἰς τὸ ὁμόφυλον συναγελάζεσθαι διὰ τὴν φύσεως ἀσθένειαν—ἀνάγκη τὸν τῇ σωματικῇ ῥώμῃ καὶ τῇ ψυχικῇ τόλμῃ διαφέροντα, τοῦτον ἡγεῖσθαι καὶ κρατεῖν, καθάπερ καὶ ἐπὶ τῶν ἄλλων γενῶν ἀδοξοποιητῶν ζῴων θεωρούμενον τοῦτο χρὴ φύσεως ἔργον ἀληθινώτατον νομίζειν, παρ' οἷς ὁμολογουμένως τοὺς ἰσχυροτάτους ὁρῶμεν ἡγουμένους, λέγω δὲ ταύρους κάπρους ἀλεκτρυόνας, τὰ τούτοις παραπλήσια.	*καὶ γὰρ ζῷα . . . ὁμογενέσι ζῴοις συναγελάζεται, ὡς περιστεραὶ περιστεραῖς καὶ γέρανοι γεράνοις καὶ ἐπὶ τῶν ἄλλων ἀλόγων ὡσαύτως.*

As quoted by Sextus (*Adv. math.* 7.117), Democritus B164 compares animal aggregations, not to human ones, but to those of similarly shaped atoms. The reference to animals as *aloga*, however, supports the suggestion of those who suppose the original comparison to have been with men as well.[10] There is nothing peculiarly Democritean about the idea that like is attracted to like, in all realms of existence. Nor is the form of argument used —the appeal to animal behavior to establish what is "natural" rather than acquired in man—unparalleled elsewhere.[11] Yet the fact that the same conjunction of ideas together with rather similar phraseology appears in both Polybius and Democritus, that Polybius goes back in all probability (as the argument of Chapter Seven has shown) to a pre-Platonic source, and that

[9] This is what happens, for example, during the original discovery and subsequent application of fire. A certain natural process impinges on the human *kosmos* and is then made part of it and accommodated to its pattern. Similarly, wild animals will be either thrust away and killed or else domesticated—i.e. forced to conform to and assist in the development of this same human pattern.

[10] So Uxkull-Gyllenband, 31, followed by Havelock, 412.

[11] Its earliest datable appearance is in the *Clouds* of Aristophanes (1427–29).

B164 is the only place in Greek literature before *Laws* 680DE where man is placed in a category along with certain other animals as a *zôon synagelastikon*—all this must be allowed to carry some weight. There is also a trace of what may have been one further parallel between the views of Democritus and Polybius on the earliest human society, or, more precisely, on the position which the strongest individuals in it occupied.

Polybius adduces the example of animal behavior to prove two points: first, the naturalness and inevitability of man's tendency to aggregate after his kind; secondly, the equally natural character (cf. 6.5.8: *φύσεως ἔργον ἀληθινώτατον*) of the tendency for the strongest member of the herd to rule. The natural principle proclaimed here is as much a commonplace as the one that like seeks like.[12] Yet when the two ideas are combined, as they are in Polybius, the result is considerably less commonplace—a more balanced and complex picture of the state of nature than is usually found in Greek thought.[13] A fairly close parallel is found in *Laws* III, where, however, parental rule takes the place of rule of the stronger. The result, in Plato's account, is an identification of *kreittôn* with "better", and this dispenses with the interaction of the opposed principles of force and consent (see above, pp. 92–93) that is essential to Polybius' whole conception of prehistory. The power of the man who is *kreittôn* in Plato's sense is from the very beginning genuinely productive of a social order, not, as it is in Polybius, something with a limited usefulness that must ultimately be supplemented and improved upon. A more exact parallel to Polybius, though from a different context, is to be found in the political fragments of Democritus, where the claims (and dangers) of superior ability are constantly being balanced against those of collective will and custom, in the same way as herd instinct and solidarity are balanced against the power of the stronger in Polybius' account.[14] The one fragment which expresses most clearly the natural character of rule of the stronger

[12] Cf., for example, Plato, *Gorgias* 483AC; Moschion, Fr. 6.15–17 (*TGF* 814); Thucydides 5.105.2.

[13] So much so that at least one modern scholar has declared the combination to be impossible. Largely on the basis of Democritus B164, Lana (*RendLinc* Ser. 8, 5.187–201) draws an unnecessary distinction between a "Democritean" and a "Protagorean" view of the origin of society, in which the causes of the original aggregation are, respectively, *philallêlia* and the fear attendant on human weakness (cf. Plato, *Protagoras* 322B). He thus concludes that a theory of the primitive rule of *bia* such as lies behind the picture of human cannibalism in Diodorus 1.90.1 cannot be Democritean, "a meno di ammettere che gli uomini si sentissero attirati l'uno verso l'altro . . . per mangiarsi a vicenda" (193, note 1). But the combination of ideas is merely unusual, not impossible (cf. above, p. 84, with note 11) and fits quite well with Democritean psychology; cf. B203: *ἄνθρωποι τὸν θάνατον φεύγοντες διώκουσιν*. See also below, p. 131.

[14] Contrast Democritus' praise of *dêmokratia* (B251), *nomos* (B245 and 248), and *homonoia* (B250) with the defense of *archontes* and the exclusion of *kakoi* from their ranks found in B254 and 266. For the compromise political program to which such considerations seem to have led him see B255 (discussed below, pp. 120–21) and Aalders, *Mnemosyne* Ser. 4, 3.310.

(B267: φύσει τὸ ἄρχειν οἰκήιον τῷ κρέσσονι) closely recalls a phrase which occurs in Posidonius' discussion of the original human aggregate: *natura est potioribus deterioribus summittere.*[15] We do not know whether the principle enunciated in B267 was ever applied to *Kulturgeschichte.* But the existence of the fragment does indicate that Polybius' account of social genesis is thoroughly compatible with the general social and political philosophy of Democritus.

Compatibility of viewpoint does not in itself allow us to conclude that, at any point where Polybius' view of the beginnings of society diverges from Plato's, the former represents the more faithful record of a common Democritean source. But it does suggest that this possibility should be borne in mind—and that Book VI should be examined for any further Democritean parallels, whether general or specific, that it may contain.

2. Society and the Family

Plato's notion of the single family as the nucleus of society is, as we have seen, unlikely to be Democritean. No less un-Democritean is the role which he assigns to the family through the whole subsequent development of the social aggregation. The principle of paternal authority is that on which all power ultimately rests: the earliest of political arrangements is the "justest of all kingships", in which children obey the rule of their parents. The patterns of obedience which arise thereby are evidently the *patrioi nomoi* to which Plato refers, and the only internal political change mentioned in the remaining portion of his account takes place when there comes a need for compromise between different sets of such *nomoi.* How far this picture is from any possible Democritean view of the role of the family in human history is evident from B278, which contrasts human child-rearing and its animal counterpart. Both men and animals beget children in obedience to the same natural law; animal parents, however, seek no reward for the affection and care which they lavish on their offspring. Among men, on the other hand, "there has come into being an established usage (*nomizon*)"[16] whereby the parents derive benefit from the child as well. Here the principle governing the parent-child relationship is neither instinctive nor paternalistic. It falls within the realm of *nomos* and has its origin at a given point in time; moreover, it represents an exchange of services, not the rendering of obedience to

[15] The parallels between this discussion and the corresponding portion of Polybius' account have already been noted, above, pp. 95–96.

[16] The general meaning of the term which stood in Democritus' text at this point seems to be fairly clear, even if the manuscript reading of *nomizon* is to be rejected. See *VS ad loc.*

a superior. Democritus' view is, it should be noted, exactly that of Polybius, as a comparison with 6.6.2–5 shows:

Polybius 6.6.2–5	Democritus B278
πάντων γὰρ πρὸς τοὺς συνουσίας ὁρμώντων κατὰ φύσιν, ἐκ δὲ τούτου παιδοποιίας ἀποτελουμένης, ὁπότε τις τῶν ἐκτραφέντων εἰς ἡλικίαν ἱκόμενος μὴ νέμοι χάριν μηδ' ἀμύναι τούτοις οἷς ἐκτρέφοιτ' ἀλλά που τἀναντία κακῶς λέγειν ἢ δρᾶν τούτους ἐγχειροίη, δῆλον ὡς δυσαρεστεῖν καὶ προσκόπτειν εἰκὸς τοὺς συνόντας καὶ συνιδόντας	*ἀνθρώποισι τῶν ἀναγκαίων δοκεῖ εἶναι παῖδας κτήσασθαι ἀπὸ φύσιος καὶ καταστάσιός τινος ἀρχαίης· δῆλον δὲ καὶ τοῖς ἄλλοις ζώοισι. πάντα γὰρ ἔκγονα κτᾶται κατὰ φύσιν ἐπωφελείης γε οὐδεμιᾶς εἵνεκα·*
τὴν γεγενημένην ἐκ τῶν γεννησάντων ἐπιμέλειαν καὶ κακοπάθειαν περὶ τὰ τέκνα καὶ τὴν τούτων θεραπείαν καὶ τροφήν. τοῦ γὰρ γένους τῶν ἀνθρώπων ταύτῃ διαφέροντος τῶν ἄλλων ζώων ᾗ μόνοις αὐτοῖς μέτεστι νοῦ καὶ λογισμοῦ,	*ἀλλ' ὅταν γένηται ταλαιπωρεῖ καὶ τρέφει ἕκαστον ὡς δύναται καὶ ὑπερδέδοικε μέχρι σμικρὰ ᾗ καὶ ἤν τι πάθῃ ἀνιᾶται. ἡ μὲν φύσις τοιαύτη πάντων ἐστὶν ὅσσα ψυχὴν ἔχει.*
φανερὸν ὡς οὐκ εἰκὸς παρατρέχειν αὐτοὺς τὴν προειρημένην διαφοράν, καθάπερ ἐπὶ τῶν ἄλλων ζώων, ἀλλ' ἐπισημαίνεσθαι τὸ γιγνόμενον καὶ δυσαρεστεῖσθαι τοῖς πάρουσι προορωμένους τὸ μέλλον καὶ συλλογιζομένους ὅτι τὸ παραπλήσιον ἑκάστοις αὐτῶν συγκυρήσει.	*τῷ δὲ ἀνθρώπῳ νομίζον ἤδη πεποίηται ὥστε καὶ ἐπαύρεσίν τινα γίγνεσθαι ἀπὸ τοῦ ἐκγόνου.*

In both Polybius and Democritus two aspects of the relationship between parents and offspring are considered. The first is that which is natural and unavoidable. Procreation of children follows inevitably from man's nature, and this in turn leads to parental care for offspring. In this man is no different from the other animals. Against such behavior is set the specifically human: that which secures to the parent some enjoyment from his child, or that which brands acts of filial ingratitude with anger and indignation.

The specifically human aspect of the relationship is said to be *nomizon* in Democritus. The term is not found in Polybius,[17] but recalls the *nomizomena* of Polystratus' closely parallel analysis (see above, pp. 81–82). There is, moreover, evidence to show that the actions which acquire commendation or censure in Polybius—failure to make proper return to one's parents, failure to repay benefactors, sharing in the common defence—are precisely those which in the fifth and fourth centuries would have been likely to be designated by *nomos* or words involving the same stem. Three closely similar texts, one from Aristotle's *Rhetoric* (1.1374A18–25), one from the *Rhetoric to Alexander* usually ascribed to Anaximenes (1.1421B35–22A2), and one from Xenophon's *Memorabilia* (4.4.19–24), contain discussions of unwritten *nomoi* which strongly recall the present passage. For these three writers, unwritten

[17] Cf., however, 6.4.5, which makes care of parents a practice which is *patrion kai synêthes* (i.e. part of *hoi patrioi nomoi*) in a well-run democracy.

law involves the expectation among all members of society that certain types of conduct will be adhered to. The types specified are as follows:

	Aristotle	Anaximenes	Xenophon
	ἄγραφα δίκαια:	ἔθος ἄγραφον:	ἄγραφοι νόμοι:
(1)	χάριν ἔχειν τῷ ποιήσαντι εὖ . . . ἀντευποιεῖν τὸν εὖ ποιήσαντα	ἐνεργέταις χάριν ἀποδιδόναι	τοὺς εὖ ποιοῦντας ἀντευεργετεῖν
(2)	βοηθητικὸν εἶναι φίλοις	φίλους εὖ ποιεῖν	
(3)		γονέας τιμᾶν	γονέας τιμᾶν
(4)			θεοὺς σέβεσθαι

The similarities between Aristotle and Anaximenes are most naturally explained on the assumption that both passages derive from the rhetorical tradition of the fifth century;[18] and that this portion of the tradition has its roots in Sophistic discussions of *nomos* is suggested by the parallels in Xenophon, which occur during the course of a discussion between Socrates and Hippias.[19] The three examples of *ethos agraphon* adduced by Anaximenes, all of which are paralleled either in Xenophon or Aristotle, involve exactly those types of conduct with which Polybius is concerned: treatment of parents, behavior to benefactors, and aid to one's associates.[20] This evidence, combined with that of Polystratus, makes it very probable that Polybius was drawing upon a source which described the origin of three basic *nomizomena.*

Democritus was not, of course, the only author to deal with *agraphoi nomoi,*[21] nor is the contrast between animal and human child-rearing unparalleled elsewhere in ancient thought.[22] What is unparalleled outside the two passages under discussion, however, is the notion that the pattern of

[18] For a fifth century parallel, cf. Euripides, *Hec.* 800–1: νόμῳ γὰρ τοὺς θεοὺς ἡγούμεθα καὶ ζῶμεν ἄδικα καὶ δίκαι' ὡρισμένοι, which recalls both Xenophon and Anaximenes' definition (1.1421B36–37) of *dikaion* as ἔθος ἄγραφον διορίζον τὰ καλὰ καὶ αἰσχρά. And with the references to benefactors compare *VS* 88B25.3–4 (the *Sisyphus* fragment of Critias): before the introduction of *nomoi* there was neither reward for good men nor punishment for bad.

[19] Sophistic influence is also suggested by the contractual definition of law which immediately follows Anaximenes' remarks on *ethos agraphon* (1.1422A2–4).

[20] Xenophon's *theous sebesthai,* which has no parallel in Polybius, Aristotle, or Anaximenes, may reflect more completely the tradition all four authors are following. Reverence toward gods and justice toward one's fellows would thus have been linked together as fundamental constituents of morality: cf. Plato, *Prot.* 325A and D; Gorgias, *VS* 82B6, p. 286.12–15; and Euripides, *Hec.* 800–1 (above, note 18). It is possible, however, that Xenophon is making a pious addition to what he found in his source—an addition suggested by the frequent association of *goneis* and *theoi* in passages dealing with the fundamental human obligations: cf. Aeschylus, *Suppl.* 704–9; Euripides, Fr. 853 (*TGF* 638); Isocrates, *Dem.* 16; Plato, *Laws* 724A, 854E; Lycurgus, *Leocr.* 15, 94, 97; Polybius 6.4.5.

[21] Cf., in addition to the passages cited in the text, Sophocles, *Ant.* 454–55; Thucydides 2.37.3.

[22] It was drawn by the Epicureans (cf. Plutarch, *Am. prol.* 2.495A=527 Usener), by Ps.-Aristotle, *Oec.* 1.1343B20–23, and by Xenophon, *Oec.* 7.19. (On the possibility of Democritean influence in the last-named work, however, see Praechter, *Hermes* 50.144–50.)

human child-rearing is a *nomos* with a given point of origin—and so in a sense "unnatural"—not, as other accounts would have it, the immediate and inevitable reflection of a characteristic difference between human and animal *physis*.[23] The historical perspective is more obviously present in Polybius since we possess the context of his remarks; but it is, I believe, almost certain that B278 was composed from the same perspective. The phrase ἤδη πεποίηται indicates that there was in Democritus' view a time when the particular *nomizon* with which he is dealing did not exist; and ἤδη is the same adverb used in another fragment (B144) whose context was undeniably *Kulturgeschichte*—the one on the late origin of music. Music and other fine arts arise ἐκ τοῦ περιεῦντος ἤδη. In both passages ἤδη emphasizes the fact that the condition described has not always existed. It is only now (ἤδη = *nunc demum*), not at all periods in man's history, that a *nomizon* governing child rearing is operative; it was when a condition of superfluity had obtained, and only then (*tunc demum*), that certain arts became possible.

The specific parallels between what Polybius and Democritus have to say about the family at this point can be supplemented by considerations of a more general nature. In any Democritean theory of a gradually expanding social group the family was, as we have seen, unlikely to have played the same role as it has in Plato. A comparison with Polybius, however, indicates that it may have had some role and suggests also what that role might have been. For Polybius, though he has no counterpart to the later stages of the process described in the *Laws*, does seem to see in the life of the family one of the starting points for a more complex social existence. The initial human group as he conceives it is a loosely organized collection of individuals whose only common activity is self-defence in times of danger. In the absence of such danger the only individuals linked to each other by a close relationship would be parents and children, since the young mammal's inability to provide for itself makes such relationships inevitable. It would thus be natural to expect patterns of social behavior involving parents and children to be among the first to arise. Once the exchange of services between parent and child has been regulated by a system of cooperation advantageous to both, the principle of reciprocity might well be carried over into other types of relationship. The normative parent-child relationship is thus a model for other forms of *koinônia*,[24] though not, of course, the only model. The friend-

[23] Xenophon (above, note 22) speaks, like Democritus, of the action of *physis* and *nomos* in determining the *mores* of family life (7.16; cf. also 7.30); but there *nomos* adds nothing new: it merely ratifies what is already inherent in man's nature.

[24] The relationship between society and family may have been conceived in other terms as well. In a passage already discussed (5.1021–23, see above, p. 76) Lucretius suggests that the desire to secure protection for their families was one of the considerations which led men to form the first social compact (*et pueros commendarunt muliebreque saeclum*). Here the Epicurean analysis of society

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ship established between the giver and receiver of aid in moments of danger would doubtless have the same archetypal character.

Beginning in this fashion with the members of a single family or with comrades in battle, principles of interdependence and reciprocity gradually become operative in all types of relationship, producing eventually the social cohesion on which the institution of kingship rests. Polybius himself does not describe any extension of the process resulting in the creation of larger social units, but the line of reasoning which underlies his account could readily have envisioned just such an extension. Cooperation and friendship are stronger bonds than force and fear; hence they will be able to hold together larger numbers of people. And since the principle of reciprocity is no longer confined to mutual assistance in battle but is being constantly reapplied in new situations, men will look upon every addition to the original group as a source of potential benefits to themselves.[25]

The process, if envisioned in this fashion in Polybius' source, was somewhat different from the one described in the *Laws*. There social norms begin not *from* the family conceived as part of a larger aggregation, but *in* the family as it exists in isolation. And their basis is not, as in Polybius, cooperation and gratitude, but obedience to paternal authority.

Fairly clearly, it is Polybius rather than Plato who is more likely to be preserving an accurate record of a common source at this point. His view of the family fits in perfectly with the utilitarian perspective evident in the histories of technology to which both his and Plato's account are related; whereas Plato's insistence on the natural character of paternal rule is essential to his conception of the patriarchal household as a self-sufficient and satisfactory mode of existence. We have seen, however, that this conception is closely bound up with the basic inconsistency from which his whole account suffers (above, p. 99). Plato's view of the early family belongs with the more utopian elements in his picture of primitive man and must, like these elements, be the result of modifications wrought upon a tradition which Polybius preserves more faithfully. The modifications, though far-reaching in their implications, were fairly easy to introduce. Plato had only to make an aggregation of families into a set of isolated and independent households and to replace the principle of cooperation and reciprocity of services with that of

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may preserve a motif present in the analysis drawn upon by Polybius. The idea that a man's wife and children provide a sort of surety for his loyalty to the *polis* was certainly current in the fifth and fourth centuries: cf. Thucydides 2.44.3; Aeneas Tacticus 5.1; Aeschines *Falsa leg.* 152; and below, Appendix III.

[25] For other pieces of ancient *Kulturgeschichte* which envision a progressive widening of the social and economic nexus, see Isocrates, *Paneg.* 34–42 (see below, pp. 133–37, with note 8), *Panath.* 164–66, and the section of Herodotus IV discussed below, pp. 143–45.

obedience to authority. At one point, however, the transformation has not been completely carried through. To be perfectly consistent, the merging of clans described would have to come about through the subjection of one clan to another, or of both to a third. The union of equals which does occur is a logical consequence of the process of social assimilation as conceived by Polybius; it does not follow from Plato's own conception of the genesis of society in the patriarchal household.

It is thus possible to see, in both *Laws* III and Polybius VI as they now stand, the traces of an earlier *Kulturgeschichte* which envisioned a progressive expansion of an original social nexus—but without the authoritarian implications which are present in Plato's development of the idea. Such an account would have been quite consistent with the conception of the family which appears in Democritus; and the view of *koinônia* involved fits well enough with the emphasis placed in Democritus B107 on agreement with regard to what is *sympheron* rather than *syngeneia* as the basis of *philia* (cf. also B186). The account is also consistent with what we know of Democritean speculation as to the structuring principles of the individual *kosmoi* out of which the universe is created. Unlike Epicurus, Democritus did not explain atomistic motion in terms of a single universal law subject to individual exceptions. There is no perpendicular downward motion in his system, no theory of the atomistic swerve. Rather, atoms are seen as caught up in different *kosmoi* like particles in a vortex or eddy.[26] The conformation which atoms assume in such a vortex is in Democritean terminology a *rhysmos*,[27] and since the word *rhysmos* is applied in one fragment (B266) to a political institution (the audit of officials), it is reasonable to assume that, just as societies are formed like all other *kosmoi* through aggregation of like to like, so they continue to exist, like other *kosmoi*, because the individual atomistic motions within them conform in the main to a single pattern or group of patterns—corresponding to the laws, written or unwritten, by which they are ruled. Both the physical analogy and the explicit words of B266 (which speaks of the audit as τῷ νῦν καθεστῶτι ῥυσμῷ) indicate that social patterns were viewed as subject to change. The surviving fragments contain two suggestions as to the cause posited for these changes. B33 speaks of *didachê* as something which "alters the configuration of man" (*metarhysmoi*) and in so doing "creates nature" (*physiopoiei*).[28] B197 draws a contrast between

[26] It is impossible to determine the exact relationship between the two causes of motion posited in atomistic texts—cosmic *dinê* and the attraction, interlocking, and rebounding of individual atoms. But both were essential to the theory. See, on the former, *VS* 67A1, 68A1.45, A69, 68B164 and 167; and, on the latter, *VS* 67A6, p. 72.26–27; A15, p. 75.33–35; and 68A37, p. 93.29–33.

[27] Cf. *VS* 67A6, p. 72.21; A28, p. 78.21; 68A38, p. 94.7; A44; A125; and B51.

[28] Presumably the fragment is saying the same thing as Evenus, Fr. 9 (Diehl) and *Trag. adesp.* 516 (*TGF* 940), which speak of prolonged *meletê* as equivalent to, or issuing in, *physis*; see the

anoêmones, whose lives are patterned (*rhysmountai*) by τοῖς τῆς τύχης κέρδεσιν, and *daêmones*, where the pattern is determined by the *kerdê* of *sophia*. Since the first aggregation of men brought together in obedience to an inevitable law of nature will inevitably lack *sophia* and *didachê*, any development which ensues might be expected to involve a substitution of *didachê* and *sophia* for *tychê* and *anankê* as the ordering principles of the social *kosmos*; and it is just such a process which Polybius describes. The *systêmata*[29] whose development is traced in Book VI acquire a new character and configuration through the growth of social and political institutions;[30] and the result of this growth is, ultimately, to replace *bia* with *logismos* as the ordering principle of human life (6.6.12–7.3).[31] Moreover, the mechanism of the change is, if not unmistakably and uniquely atomistic, susceptible of an exceptionally easy translation into atomistic terms.

To make this translation we need only identify the atoms with the individual men and women who make up the social ordering, and the *rhysmoi* of a given *kosmos* with the shared habits and institutions which hold it together. Polybius' whole account then becomes a description of how a group of like atoms are thrown together and then made to conform to *rhysmoi* that are characterized by an increasing elaborateness and inner harmony. The increase in elaborateness means that an ever larger portion of the movements of an ever larger number of atoms will stand in constant relationship to those

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discussion in Vlastos, *PhilRev* 55.55–56. Later occurrences of the idea are assembled and discussed by Lenz, *TAPA* 73.215–17, who suggests (218–24) that the phrase ἔθος δευτέρη φύσις in Julian, *Misopogon* 353A, goes back to Democritus. If so, Democritus may have been the source for the Epicurean use of the idea; cf. Cicero, *Fin.* 5.74: *consuetudine quasi alteram quandam naturam effici*, where the reference is to the doctrine propounded in *Fin.* 1.69 (cf. above, Chap. VI, note 12, and below, Chap. IX, note 29).

[29] *Systêma* in the sense of "aggregation" appears in Polybius (6.5.10), in Diodorus I (1.8.4; 90.1—see above, pp. 64–65) and in certain other Hellenistic texts (e.g. Iambulus *ap.* Diod. 2.57.1 and Diod. 3.32.1, cited in Chap. VII, note 9). The term was atomistic by Epicurus' time (*Pap. Herc.* 993 col. 3.ii.2, p. 195 Arrighetti) and is used by Diogenes Laertius in reporting the views of Leucippus and Democritus (*VS* 67A1, p. 71.5; 68A1, p. 84.15). Whether it was so used by them we do not know. It has, however, the same wide range of meaning as *kosmos* and *rhysmos*; cf. Aristotle, *EN* 9.1168B31–32: πόλις . . . καὶ πᾶν ἄλλο σύστημα.

[30] Whether Polybius would have regarded this process as a change of *rhysmos* which *physiopoiei* we do not know. It is worth noting, however, that at three points he insists that the new order of things is a "natural" one; cf. 6.5.4, φύεσθαι τὰς πολιτείας; 6.5.10, ἀρχὴ βασιλείας φύεται; and 6.7.1, κατὰ φύσιν ἔννοια.

[31] For Democritus' recognition of *logismos* as a specifically human excellence compare B187, on the inadequacy of σκήνεος ἰσχὺς ἄνευ λογισμοῦ, with B57, which contrasts human nobility (ἦθεος εὐτροπία) with that of animals (σκήνεος εὐσθένεια); cf. also B2 and B236. It need not follow that he was prepared to give an atomistic account of the workings of *logismos*. Of this there is no clear trace in the surviving fragments, though much of what is said in them about the moral and emotional aspects of human life can be analyzed in atomistic terms (see, for the latter, Vlastos, *PhilRev* 54.578–92; Krokiewicz, *Eos* 47, No. 1, 35–43; and Luria, *DAWB* 44.14–16).

of other atoms. This is the atomistic counterpart to that multiplication of the bonds of *koinônia* which was mentioned earlier as a characteristic feature of the process of social development as seen by Polybius.[32] The increase in harmony means that the new patterns governing the relationships of parents and children, subjects and leaders are such as to minimize collision between atoms—hence more stable and so destined to prevail over the old ones. These new *rhysmoi* first come into competition with the old as a result of the *eventus fortuitus* whose role both in Polybius and the other texts of our tradition was discussed earlier (above, pp. 85–91). And it is on atomistic grounds that the occurrence of such *eventus fortuiti* is most plausible. Both Polybius and Plato contain references to the size of the aggregations with which they are dealing,[33] and this suggests that their source was influenced by considerations similar to those which lie behind Democritus' insistence on an infinite number of atoms: μόνοις τοῖς ἄπειρα ποιοῦσι τὰ στοιχεῖα πάντα συμβαίνειν κατὰ λόγον (A38). Only when the number of atoms in the physical universe is infinite can one plausibly maintain that mere chance would have been sufficient to create all the collocations and arrangements on which that universe rests; only when the multitude of men gathered together is sufficiently large can one plausibly dispense with theological and teleological causes and maintain that men would have been presented by mere chance with sufficient instances of new *rhysmoi* to be able to perceive through *logismos* the advantages (or disadvantages) inherent in them and repattern their lives accordingly.[34]

Once inaugurated, however, the process is self-perpetuating and cumulative. For as the movements of the individual members of each *kosmos* become more and more integrated into a harmonious whole, its overall *rhysmos* becomes more pervasive and pronounced—and so capable of accommodating a larger number of atoms. Hence the phenomenon of cosmic expansion.[35] Hence too the final substitution of *logismos* for *bia*, which comes

[32] Concerning the character and number of the bonds which would have been viewed as already present in the earliest, animal-like aggregation one can, of course, only speculate. Luria has argued (*DAWB* 44.10–13) that Democritus adduced significant animal analogues not only for the family in its most rudimentary form but also for most social prohibitions governing sexual behavior as well as various other human *nomoi*. It would follow that Democritus regarded such phenomena as instinctual and original in man, so that the first human *systêma* would have been a much more ordered and homogeneous unit than the evidence of Polybius would suggest. But the Democritean character of the passages on which Luria bases his argument is, at best, highly dubious.

[33] Cf. item 6 in our summary of Plato's account (above, p. 97) and Polybius 6.5.6: ὅταν . . . αὐξηθῇ σὺν χρόνῳ πλῆθος ἀνθρώπων.

[34] The system of rewards and punishments through which the repatterning occurs has no clear parallel in Democritus; cf. however what is said about *poena* and *beneficium* in A76.

[35] Cf. Leucippus, *VS* 67A1, p. 71.9–10: αὐτόν τε πάλιν τὸν περιέχοντα οἷον ὑμένα αὔξεσθαι κατὰ τὴν ἐπέκκρισιν τῶν ἔξωθεν σωμάτων δινῇ τε φερόμενον . . . ὧν ἂν ἐπιψαύῃ πάντα ἐπικτᾶσθαι. . . .

about when this same *rhysmos* is sufficiently strong to provide, independently of the constraining influence of *monarchos* or *dynamenoi*, the cohesiveness necessary for the continued existence and well-being of the *kosmos*.

To have indicated the lines which an atomistic interpretation of Polybius' account of social development might take is not to show that the account is in fact atomistic in origin. Yet the parallels on which the interpretation rests are, I think, sufficiently numerous to be of some importance within the complex of evidence considered in this chapter. One major element in that complex has still to be discussed. It involves the Polybian and Democritean views of the beginnings of kingship.

3. The Political, the Military, and the Royal Art

Polybius' account of the fortunate accident which leads to the replacement of *monarchia* with *basileia* should be compared with fragment B255 of Democritus:

Polybius 6.6.10–7.2

ἐν οἷς ὅταν ὁ προεστὼς καὶ τὴν μεγίστην δύναμιν ἔχων ἀεὶ συνεπισχύει τοῖς προειρημένοις κατὰ τὰς τῶν πολλῶν διαλήψεις καὶ δόξῃ τοῖς ὑποτατταμένοις διανεμητικὸς εἶναι τοῦ κατ' ἀξίαν ἑκάστοις, οὐκέτι τὴν βίαν δεδιότες τῇ δὲ γνώμῃ τὸ πλεῖον εὐδοκοῦντες ὑποτάττονται καὶ συσσῴζουσι τὴν ἀρχὴν αὐτοῦ ὁμοθυμαδὸν ἐπαμύνοντες καὶ διαγωνιζόμενοι πρὸς τοὺς ἐπιβουλεύοντας αὐτοῦ τῇ δυναστείᾳ. . . . αὕτη καλοῦ καὶ δικαίου πρώτη παρ' ἀνθρώποις κατὰ φύσιν ἔννοια καὶ τῶν ἐναντίων τούτοις, αὕτη βασιλείας ἀληθινῆς ἀρχὴ καὶ γένεσις.

Democritus B255

ὅταν οἱ δυνάμενοι τοῖς μὴ ἔχουσιν καὶ προτελεῖν τολμέωσι καὶ ὑπουργεῖν καὶ χαρίζεσθαι, ἐν τούτῳ ἤδη καὶ τὸ οἰκτίρειν ἔνεστι καὶ τὸ ἀμύνειν ἀλλήλοισι καὶ τοὺς πολιήτας ὁμονόους εἶναι καὶ ἄλλα ἀγαθά, ἅσσα οὐδεὶς ἂν δύναιτο καταλέξαι.

The above passages contain important similarities. The position of the *dynamenoi* in Democritus is analogous to that of the *προεστὼς καὶ τὴν μεγίστην δύναμιν ἔχων* in Polybius, and the parallel was probably even closer in Polybius' source. For, as we have seen (above, pp. 101–2), there is reason to believe that that source spoke of *dynasteia* and *dynastai* rather than of *monarchia* and *monarchos*. Polybius' *ὑποταττόμενοι* are the *μὴ ἔχοντες* of Democritus; to act *κατὰ τὰς τῶν πολλῶν διαλήψεις* is certainly to *χαρίζεσθαι τοῖς μὴ ἔχουσι*; and the two passages are further linked by similarities of vocabulary and tone. *Ὁμοθυμαδὸν ἐπαμύνοντες* in Polybius recalls *ἀμύνειν ἀλλήλοισι* and *πολιήτας ὁμονόους* in Democritus; and there is a similar striving for rhetorical effect in the way the importance of the events mentioned in the two temporal clauses is emphasized (compare the anaphora of *αὕτη καλοῦ καὶ δικαίου . . . αὕτη βασιλείας* with the polysyndeton of *καὶ τὸ οἰκτίρειν . . . καὶ μὴ ἐρήμους εἶναι* etc.).

Along with these similarities are certain differences whose importance cannot be ignored. One misses in Polybius any reference to the establishment of those feelings of fellowship and compassion which appear so prominently in Democritus. For Polybius it is *logismos*, not *to oiktirein* and *homonoia*, which replaces fear and reliance on strength in the minds of subject and ruler. There is nothing in either the Polybian or Democritean formula to rule out the possibility that both sentiment and calculation are involved, but a difference in emphasis is undeniably present. And in keeping with this difference is a difference in the character of the actions referred to. Polybius speaks of action taken in accordance with popular notions of what is right; Democritus of assistance (presumably economic) given by rich to poor. The term *charizesthai* is vague enough to include the adherence to popular notions of right that Polybius stresses; and both this adherence and the giving to each man of his due (the other royal activity mentioned by Polybius) would certainly require a refraining from decisions which sacrifice the interests of the poor to those of the more powerful class of which the strong man is himself a part. The two passages are not incompatible here, but one is certainly far more inclusive than the other. Finally, our passages seem to have been composed for slightly different contexts. Democritus is attempting to formulate in as general terms as possible the preconditions for any type of social accord; and the result could apply equally well to the primitive society divided between strong and weak which Polybius envisages or to a commercial society divided between rich and poor. On the other hand, B157, which speaks of "governments and polities and the friendships of kings" as great blessings for human life, does offer evidence for believing that Democritus would have viewed at least the institution of kingship as resting on the same sort of royal good will which Polybius describes,[36] and so important a feature of an institution might well have been seen as characterizing it from its inception. The appearance of the same adverb ἤδη that was used in the fragments on music and the mores of family life would also indicate that the perspective of B255 is, at least partially, historical: man's situation after a certain event of great importance is being contrasted with his situation before that event. It cannot be said that the aspect of the two passages we have just been discussing involves—any more than do the other divergences considered—a direct contradiction. But, here as elsewhere, the resemblances are more generic than specific, enough to point to some sort of connection but insufficient in themselves to establish the existence of direct indebtedness.

This impression is confirmed by a third piece of evidence. A fragment

[36] Friendship of kings may refer to private *philiai* between monarch and individual subjects, but if it does it is something of an anti-climax after "governments and polities." It is more natural to assume that it means the sort of royal beneficence to which Polybius refers.

attributed to Archytas of Tarentum (*VS* 47B3), which obviously belongs to the same general tradition as do Polybius and Democritus, praises *logismos* as an invention (*heurêma*) which reduces strife and increases *homonoia* (cf. πολιήτας ὁμονόους in B255) by making the rich give to the poor and the poor receive from the rich, both sides "trusting thereby to attain equality." Archytas recalls Polybius by his reference to *logismos*[37] and Democritus by his emphasis on economic rather than judicial concessions to the poor. The passage thus serves to lessen somewhat the importance of the difference of emphasis noted between the other two; but if it makes the links between them stronger, it also makes them more general. For other passages can be cited which praise a similar policy of compromise between the weaker and stronger elements in the body politic;[38] and within this very general line of thought the only thing which distinguishes Archytas, Democritus, and Polybius is their conviction that the desirable arrangement is one which came into being at a given time in history[39] and carried with it far-reaching consequences.

To determine whether there is any further link between Polybius and Democritus other than this idea which they share with Archytas, one must consider not simply the content of the political arrangement which all three authors favor but also what is said in Polybius about the way in which it comes into being. The third of the situations described in 6.6.2–9 tells how

> whenever anyone champions the cause of all in moments of danger and supports and withstands the attacks of the fiercest of animals, it is likely that he will receive from the people marks of good will and pre-eminence, and that the man who does the opposite will be condemned and give offence.

The result is "a certain notion and perception of the character of the fitting, which is the origin and end of justice" (6.9), or, in Anaximenes' terminology (see above, pp. 113–14) an *ethos agraphon* prescribing that men should φίλους εὖ ποιεῖν. It is obvious that the marks of good will and pre-eminence referred to in 6.8 are in some sense parallel to the later honors which the king receives. They represent similar returns for similar services—services offered, respectively, in the external and internal life of early society. First there is an

[37] The usual translation of *logismos* in the Archytas fragment is "proportion" or "measure": the mathematical ratio which establishes aristocratic or geometric equality among men in their dealings with each other. But "calculative reasoning" (so Havelock, 239) or some such rendering—which would bring the content of the fragment into line with the parallel in Polybius—is the one which the context demands. *Logismos*, we are told (*VS* 47B3, p. 437.13–438.3), has the power to check those *epistamenous logizesthai* among potential wrongdoers by making them reflect on the possible consequences of their actions.

[38] Cf. Anonymus Iamblichi 7.1–2 and 8–9; Isocrates, *Areop.* 31–35; Aristotle, *Pol.* 6.1320B9–11.

[39] This historical perspective seems to be established for Archytas by his reference to *logismos* as a *heurêma*.

exercise of force in restraining the animal enemies of the human *systêma*, then a similar exercise of force (cf. 6.6.10: *synepischyei*) in seeing to it that the *dialêpseis* of the many prevail when social mores are violated, or when rights must be apportioned between contending parties.

This association of military activity (the province of the *prostatês* mentioned in 6.6.8) with the maintenance of the social order (the province of the monarch turned king) can be paralleled at several places in Greek political theory, always in a context of *Kulturgeschichte*. Two of the places we have already had occasion to mention. The earlier is the *Protagoras* myth (see above, p. 50), which tells how early men were at first unable to defend themselves against the wild beasts because of their lack of *politikê technê*—of which *polemikê technê* is, according to Protagoras, a part. When assembled for self-defense, however, they did wrong (*adika*) to one another for the same reason—their lack of *politikê technê* (322B). The most striking thing in this passage is, as has rightly been pointed out,[40] the notion that the "political" art has two parts. One of these is *polemikê* and is brought into play only in man's relationship with other animals. The other governs their relations among themselves and seems to have as its main constituent *dikê* (inasmuch as its absence is accompanied by the presence of *adikia*).

The two portions of *politikê technê* mentioned in the myth correspond fairly closely to the provinces of the Polybian *prostatês* and the Polybian king; and a similar division and association, though without the same establishing of explicit categories, appears in the passage from Hermarchus discussed in Chapter Five (above, pp. 71–75). For the prohibition against unprovoked homicide—one of the cornerstones on which any art of the practice of *dikê* must rest—is there said to have come into existence at the same time as the practice of destroying wild beasts (*polemikê technê* as Protagoras defines it) and in response to the same cause, the promptings of *to chrêsimon* in the earliest stages of social existence.

Other parallels between Polybius and Hermarchus have been discussed earlier (above, pp. 81–84). Given these, and given the parallels between Polybius and Protagoras just noted, it is not likely to be coincidental that there are also close links between Hermarchus and Democritus,[41] whose influence on Hermarchus' master is unquestionable and who is usually assumed with a high degree of probability to have been himself indebted to Protagoras for a portion of his theories of cultural history. Two fragments (B257 and 259) establish it as a rule that animals "who do wrong" (*ta adikeonta*) may be killed with impunity, since the result is conducive to well-being. The idea is the same as that which appears in Hermarchus, and is

[40] By O. Gigon, "Studien zu Platons Protagoras," *Phyllobolia für P. von der Mühll* (Basel, 1946), 148 ff.

[41] Noted by Krohn, *Der Epikureer Hermarchos* 8.

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presented in language which may have an echo in Porphyry's paraphrase of the latter:

HERMARCHUS	DEMOCRITUS
The practice of destroying every harmful thing without quarter (*τό τε λυμαντικὸν πᾶν κτεινόμενον ἀφειδῶς*) and the preservation of what was useful for this act of destruction [i.e. society and the prohibition against homicide] contributed in like fashion to security (*εἰς τὴν ἀφοβίαν συνήργει*). (*De abst.* 1.11)	It is needful to kill those things which do harm contrary to right (*κτείνειν χρὴ τὰ πημαίνοντα παρὰ δίκην*) all of them in every way (*πάντα περὶ παντός*). . . . (B258) . . . of those animals who do wrong and seek to do wrong the slayer is scot free and this rather than not killing works toward well-being (*πρὸς εὐεστοῦν τοῦτο ἔρδειν*). (B257)

The reference to animals as creatures who do wrong recalls another motif in Hermarchus, his linking of warfare against other animals with the process of creating proper relationships among men in a given social order. And this linking, which, as we have seen, is found in Protagoras and Polybius as well, appears explicitly in a third fragment:

For letting each other alone and doing nothing injurious to any of those who were collected into the same place was useful (*chrêsimon*), not only for driving away animals of other species, but also against men who came along with hostile intent. (*De abst.* 1.10)	Just as it is written with regard to beasts and creeping things among enemies, so does it seem needful (*chreon*) to me to act with regard to men: to kill in accordance with ancestral ways the enemy thing in every social order. (B259)

The reasoning in the passage from Porphyry is carried a step further than it is in Democritus, to the point where not only killing the enemy but action which facilitates killing the enemy is declared to be *chreon* or *chrêsimon*. But the reasoning used is identical.

We cannot, of course, know for certain what the context of the fragments of Democritus was. But given the parallels with Hermarchus and given also the fact that reference to the primitive condition of mankind is a recurrent motif in ancient discussions of the rights and wrongs of killing animals,[42] the most plausible conjecture[43] requires us to assume that Democritus saw the origin of society's attitude toward criminals in man's early struggle for survival against other species. The malefactor is someone who, by his violation of the laws of society, has in effect put himself outside society and must be destroyed like the animals which threaten its existence.

[42] Cf., in addition to the passages of Hermarchus cited here, the discussion of Theophrastus which Porphyry summarizes (*De abst.* 2.25–33) and, in the same work (4.22 = Fr. 98 Heinze), the report of Xenocrates' remarks on a prohibition against the slaughter of animals ascribed to the early culture-hero Triptolemus.

[43] Advanced by Havelock, 129–30. Cf. also von Fritz in *Entretiens Hardt* 7 (1960) 264, who suggests a possible connection between the idea of the needful found in B256 (*δίκη μέν ἐστιν ἔρδειν τὰ χρὴ ἐόντα*) and that *chreia* which looms so large in ancient *Kulturgeschichte*. This fragment is closely related to B258 and 259 by virtue of the similar association which all three create between the ideas of *dikê* and *chreon*.

The aspect of Polybius' account which we have just been considering serves to place him in a tradition which goes back at least to Democritus,[44] and probably, if Plato's myth does not misrepresent him, to Protagoras as well. We do not know how many other speculative accounts of cultural origins propounded a similar view of the relation between *dikê* and *polemikê technê*.[45] It is possible, however, that the theory was handed down in direct succession from Protagoras to Democritus to Epicurus, and that Polybius stands in fairly close relation to this line of intellectual descent. That this hypothesis is correct, and that it was the Democritean version of the theory which has influenced Polybius, is the conclusion to which a further group of parallels between Book VI and the fragments point. Unlike Protagoras and Hermarchus, Polybius' source seems not to have been content with associating defense against external foes and the enforcing of *dikê* in dealings among fellow-citizens, or with indicating the common origin of the two *technai* in the demands of the early struggle for survival. It suggested the actual steps through which these "arts" might have arisen. It is possible that some of these steps have been omitted in Polybius' account: that there appeared in his source some description, for example, of how, from expecting all to share in a common defence against external enemies, society comes to expect similar behavior with regard to internal ones, so that when the strong man makes the satisfaction of this expectation easier the continuance and success of his rule is assured. Be that as it may, Polybius preserves a very clear record of the final stage in the process and of the central role which one remarkable individual—the future *basileus*—plays in it.

This idea, which links a kind of *basilikê technê* to that part of *politikê technê* which has to do with *dikê*, is lacking from Hermarchus and Protagoras, but there is something quite comparable to it in Democritus. B258, after declar-

[44] Also in favor of ascribing such a linking of warfare and civic virtue to Democritus in B157, where *polemikê technê*, as well as "governments and polities and the friendships of kings," is glorified as a source of "great and glorious blessings" to mankind. (Reiske, followed by Diels, reads *politikê technê*, but in support of the *mss.* see R. Philippson, "Zu Demokrits fr. 157 D," *BPW* 46 [1926] 1100–1; H. Langerbeck, "*ΔΟΞΙΣ ΕΠΙΡΥΣΜΙΗ*," *NPU* 10 [1935] 61, note 1; Q. Cataudella, "Democrito 55B157 Diels," *Maia* 2 [1949] 268–73.) It is perhaps more than coincidental that the fragment has a verbal parallel in the passage of the *Epinomis* whose close connection with the tradition we are examining was pointed out in Chapter Seven (above, pp. 103–4):

τὸ λοιπὸν βοήθεια γίγνοιτ' ἄν . . . μυρία μυρίοις, ἡ μὲν μεγίστη τε καὶ εἰς πλεῖστα πολεμικὴ κληθεῖσα, στρατηγικὴ τέχνη, εὐδοκιμωτάτη πρὸς χρείαν. . . . (975E)	παραινεῖ [Democritus] τήν τε πολεμικὴν τέχνην μεγίστην οὖσαν ἐκδιδάσκεσθαι καὶ τοὺς πόνους διώκειν ἀφ' ὧν τὰ μεγάλα καὶ λαμπρὰ γίνονται τοῖς ἀνθρώποις. . . . (B157)

[45] A possible parallel not mentioned in the text is *Republic* 374E–76C, where the *politikê technê* of the guardians is equated with the watch-dog's two-fold ability to be *praos* toward *oikeioi* and *chalepos* to enemies. On the Protagorean affinities of this section of the *Republic* see above, Introduction, note 23.

ing that it is needful to kill all those things which do harm contrary to right, goes on to add that "the one who does this shall have a greater share of right-return (*dikê*) and security (*tharsos*) in any *kosmos*." The *dikê* referred to in this passage is probably best interpreted as the whole system of reciprocal relationships by which men receive due return for services rendered.[46] It is something far more inclusive than the marks of favor and pre-eminence and willing obedience which the king and champion enjoy in Polybius, but Democritus would doubtless have viewed the latter as coming under the general category of *dikê*. The activity praised in B258 is referred to in B259 as killing the enemy in accordance with *patrioi nomoi*, and this is certainly one way of giving each man his due in accordance with the *dialêpseis* of the many (Polybius 6.6.10).[47] In fact, if the setting for both passages is the primitive rule of *bia* described in Polybius, giving each man his due and adding support to popular attitudes would of necessity involve in large measure killing those who do violence to the weak. And that Democritus used on occasion the more general terminology found in Polybius is indicated by B263: δίκης καὶ ἀρετῆς μεγίστην μετέχει μοῖραν ὁ τιμὰς ἀξίας τὰς μεγίστας τάμνων. The parallels between the first half of this fragment and B259 suggest that it belongs to the same group of passages that we have been considering. The last half of the fragment is corrupt,[48] but the presence of the words *axias* and *tamnôn* indicates that the subject is the apportioning of what is due in the manner of Polybius' king.[49] It is reasonable to assume, then, that Democritus associated, perhaps even more closely than does Polybius, the *politikê technê* of the judge who settles disputes and the *polemikê technê* of the champion who kills *ta adikeonta* among the animals.

The parallels between Hermarchus and Democritus make it fairly clear that the context of fragments B257–59 had something to do with *Kulturgeschichte*. Since there is no parallel in Hermarchus to what is said in 258 and 263 about the man who is to receive the greater share of *dikê*, one can be less sure about the original context of this particular idea. It is possible, for example, that Democritus, while assigning to the benefactor mentioned in those two fragments a role in the social process rather like that played by

[46] Expressed in Polybian terms, it is the tendency to give like for like, the departure from which, whether in the direction of more or less, creates a *diaphora* which men notice and mark out (see above, p. 87).

[47] The parallel is even closer if, as is probable (see above, pp. 113–14), the popular *dialêpseis* and *ennoiai* mentioned by Polybius involve types of conduct which the tradition on which he is drawing viewed as governed by *agraphos nomos*.

[48] Diels suggests the restoration τιμὰς τὰς ἀξίας τάμνων τοῖς ἀξιωτάτοις.

[49] It should also be noted that, in assigning to the benefactor a greater share of *aretê* as well as of *dikê*, Democritus envisions a combination of attainments roughly comparable to that found in the Polybian *basileus*, once the latter has coupled superiority in apportioning what is due with his original superiority in *rhômê* and *tolmê*.

prostatês and king in Polybius, would still not have placed him in the same sort of historical context as does Polybius. There are, however, three additional Epicurean texts which suggest otherwise.

Given the other Democritean echoes which the collection contains,[50] *RS* 6 is of particular interest: ἕνεκα τοῦ θαρρεῖν ἐξ ἀνθρώπων ἦν κατὰ φύσιν ἀρχῆς καὶ βασιλείας ἀγαθόν.[51] The expression θαρρεῖν ἐξ ἀνθρώπων recalls θάρσος in B257, and the tense of ἦν is most naturally explained by assuming a reference to the early stages of human culture.[52] Such a context is also suggested by the parallels between another *RS* (7) and the passage in Book V (1120–28) where Lucretius describes the collapse of early kingship:

at claros homines voluerunt se atque potentes	ἔνδοξοι καὶ περίβλεπτοί τινες ἐβουλήθησαν γενέ-
ut fundamento stabili fortuna maneret	σθαι τὴν ἐξ ἀνθρώπων ἀσφάλειαν οὕτω νομίζοντες
et placidam possent opulenti degere vitam:	περιποιήσασθαι. ὥστε εἰ μὲν ἀσφαλὴς ὁ τοιούτων
. . . . .	βίος ἀπέλαβον τῆς φύσεως ἀγαθόν.
nequiquam. . . .	
ut satius multo iam sit parere quietum	εἰ δὲ μὴ ἀσφαλής, οὐκ ἔχουσι οὗ ἕνεκα ἐξ ἀρχῆς
quam regere imperio res velle et regna tenere.	κατὰ τὸ τῆς φύσεως οἰκεῖον ὠρέχθησαν.[53]

Both passages are in part a polemic against defenders of the active life,[54] and the Epicurean position is supported by a reference to the fate of the first kings. It is natural to assume that the object of the polemic had cited this example in his defense, and that Epicurus is allowing it a certain validity: office and kingship did in fact arise as part of a legitimate attempt to gain security through service of society. But they led ultimately to disaster. The character of the two passages, which accept a portion of an earlier analysis but reject others, is compatible with what we know about the entire relationship between the philosophical systems of Epicurus and Democritus. And the analysis of early kingship which emerges as that of Epicurus' opponents is equally compatible both with that which is found in Polybius and with what is said of the role of the benefactor in fragments B258 and 263. The argument for assuming that Democritus, like Epicurus and Polybius, discussed kingship in connection with a consideration of the origin of culture becomes thereby much stronger; and so too does the case for making

[50] See von der Mühll, *Festgabe Kaegi* 172–78.

[51] For the reading adopted here, see C. Diano, "Note Epicuree," *SIFC* 12 (1935) 84–85.

[52] So Grilli, *RendIstLomb* 86.21–24, against Bignone's rather improbable suggestion (*L'Aristotele perduto* 2.264–87) that Epicurus is here thinking in terms of the false values which prevailed before the promulgation of his own ethical system.

[53] For ἐξ ἀρχῆς we ought perhaps to read simply ἀρχῆς, eliminating thereby a superfluous reference to the time at which the *orexis* occurred and giving ὠρέχθησαν the object which it needs. If this suggestion is correct the parallel with Lucretius is even closer: ἀρχῆς . . . ὠρέχθησαν = *regere imperio res velle et regna tenere.*

[54] For a further discussion of this polemic and a suggestion as to the identity of the person or persons against whom it was directed, see below, pp. 168–69.

Polybius' entire account of the beginnings of kingship and *dikê* derive from Democritus.

The parallels considered in this chapter are heterogeneous in character and unequal in importance. None of the resemblances to which we have called attention is as striking, taken in itself, as some of those which appeared in the technological and linguistic texts discussed in Chapters One through Four. Yet taken together they seem to me to provide as strong a case for a Democritean influence on Polybius VI as do those examined earlier for a common source for Diodorus, Vitruvius, Lucretius, and Posidonius. For it is very unlikely that two independently formed views of social development, both of which we know to have antedated Plato's *Laws*, should agree so thoroughly as to the biological causes of the initial aggregation of men into societies, as to the character and origin of the typically human parent-child relationship, and as to the connection between the art of warfare with animals and the art of just dealing among men in primitive society. The conclusion that Polybius is indebted ultimately to Democritus for the theory of social genesis found in his sixth book is almost inescapable. What the intermediate sources were and what alterations they or Polybius himself may have made in Democritus' doctrine cannot, of course, be determined. Something more will be said on this subject later;[55] for the present one point is worth noting.

What Polybius presents in the sixth book of his *Histories* is a fairly straightforward historical reconstruction. Not so Democritus. His perspective seems to have been rather that of Hermarchus. The prohibition against homicide discussed in the latter's account is a part of "the legislation which still prevails among cities and tribes" on that subject. The approach is aetiological—a genealogy of existing morals rather than a strictly historical account of their evolution. Such a method was obviously known and used in the fifth century. It appears, for example, in the Protagoras myth and in the Anonymus Iamblichi (see above, p. 8). In a treatment of this sort the various aspects of contemporary social usage may have been covered separately, thus producing a series of *Νομικὰ αἴτια* (B299g) or *αἰτίαι περὶ τῶν καλῶν καὶ αἰσχρῶν* comparable to those *περὶ πυρὸς καὶ τῶν ἐν πυρί* which are attributed to Democritus (see above, p. 57).[56]

On the other hand, the parallels between Polybius and Plato demand, if our theory of a common source for Book VI and *Laws* III is correct, the

[55] In Section 3 of Chapter Ten.

[56] This is certainly the type of composition indicated by A151, in which Democritus is seeking an *aitia* for the *synêtheia* of breeding mules; and his concern for aetiology in general is strikingly attested in B118 and in Aelian, *HN* 6.60 (=A150a).

assumption of the existence of a historical account used by both Polybius and Plato and extant by the middle of the fourth century. It is possible to square this demand with the character of the Democritean fragments we possess by imagining such an account provided with aetiological digressions where needed: "and here for the first time men began to follow the rule which even now holds, that, etc."[57] The collectors of *gnômai* to whom we owe the ethical and social fragments would on this assumption have omitted the historical material which surrounded them;[58] whereas Polybius would have emphasized the historical element at the expense of the aetiological, introducing the whole account, not as an explanation of the genesis of morals, but as a phase in the cycle of political and social change. Traces of the earlier perspective may remain in two passages (italicized in the translations given below) where Polybius does break the continuity of his historical narrative to note that what he is describing is the *archê* and *genesis* of moral ideas:

> When, after a time, common nurture and common habits develop within the herds, *then for the first time does there come to man a perception* (ἔννοια) *of the good and the just and likewise of their opposites. And the manner of their origin is as follows*: since the sexual urge is natural in men and results in the procreation of children. . . . (6.5.10)

> In this manner, without anyone's realizing it, the monarch becomes a king—whenever rational calculation begins to rule in place of strength and daring (θυμός). *This is the natural beginning of a perception* (ἔννοια) *within man of the just and the good and of their opposites—this is the origin and coming to be of true kingship.* For men preserve the rule, not only of the first king, but also of his descendants. (6.6.12–7.2)

Though the terminology at this point, referring to moral notions as *ennoiai*, departs from anything Democritus would have been likely to use,[59] the particular aetiological perspective involved is quite close to that of the fragments.

Alternate explanations of the relationship between Polybius and

[57] Cf., in this connection, the parallels between the language of the ethical fragments and early Greek legal phraseology noted by P. Friedländer, "Ὑποθῆκαι, III," *Hermes* 48 (1913) 613, note 3. To the passages cited there should be added Antiphon, *Herod.* 92: τὴν ἴσην γε δύναμιν ἔχει ὅστις τε ἂν τῇ χειρὶ ἀποκτείνῃ ἀδίκως καὶ ὅστις τῇ ψήφῳ; and the decree quoted in Andocides, *Myst.* 97: κτενῶ καὶ λόγῳ καὶ ἔργῳ καὶ ψήφῳ καὶ τῷ ἐμαυτοῦ χειρὶ . . . ὃς ἂν καταλύσῃ τὴν δημοκρατίαν. Cf. B260: κιξάλλην καὶ ληστὴν πάντα κτείνων τις ἀθῷος ἂν εἴη καὶ αὐτοχειρίῃ καὶ κελεύων καὶ ψήφῳ.

[58] The number of *gnômai* preserved from Democritus is not in itself sufficient reason for believing that his *ethica* were composed in an exclusively aphoristic style; see Stewart, *HSCP* 63.188.

[59] On the Stoic affinities of these terms see Appendix III. *Ennoia* is, however, attested in later reports of the teaching of fifth century thinkers. Cf. Themistius 349B (= *VS* II 317.23–24) on Prodicus' theory of the origin of religion: ἱερουργίαν . . . καὶ τελετὰς τῶν γεωργίας καλῶν ἐξάπτει νομίζων καὶ θεῶν ἔννοιαν (Diels: εὔνοιαν mss.) ἐντεῦθεν εἰς ἀνθρώπους ἐλθεῖν.

Democritus are, of course, possible. Our first suggestion (above, p. 128) may be right, in which case the series of aetiologies could have been arranged so as to form in itself and along with its references to the early stages of human culture the basis from which a continuous historical account could be constructed. Polybius VI and *Laws* III would be, on this theory, independent conversions of aetiology into history. Or—a third possibility—it is conceivable that Plato and Polybius derive from an intermediate source, some rhetorician, historian, or philosopher who would have constructed a historical account around Democritus' aetiological inquiry into existing human mores.[60] But whatever share Plato, Polybius, and their immediate forerunners may have had in reformulating the Democritean *Kulturgeschichte* which is preserved in the *Histories* and the *Laws*, these contributions seem to have affected the form in which that doctrine was preserved rather than its content. The motifs whose presence can be inferred for the source of Plato and Polybius are also present in such numbers in Democritus or in texts which we can believe on other grounds to derive from him that the importance we assign to such intermediate sources cannot be large. And the same may be said about the material common to the technological and linguistic accounts examined earlier, where the existence of one or more intermediate sources is in certain instances hardly questionable. With either body of texts the argument for the preservation of most of the essential features of an ultimately Democritean theory is fairly strong; and it becomes, of course, doubly so when the two bodies of texts are considered in conjunction with each other—as is demanded both by similarities of method and by the close relationship in which both of them stand to *Laws* III. It can be maintained with a high degree of probability that the technological histories of Diodorus, Tzetzes, Vitruvius, Lucretius, and Posidonius; the accounts of the origin of language found in Diodorus, Vitruvius, and Lactantius; the social history of Polybius VI and the anthropology of *Laws* III are all Democritean; and the tradition which these texts represent will be so referred to as we attempt, in our final two chapters, to assess its place in the history of Greek thought and to trace the channels by which it was transmitted from its originator to the scattered body of later sources in which it is now preserved.

[60] If we could be surer than we are as to its exact character and importance, fourth century Pythagoreanism would be an obvious possibility for the intellectual milieu from which this intermediate source arose. The parallels between Polybius, Democritus, and Archytas have already been noted (above, pp. 121–22), and the tradition which links the Pythagoreans both to Plato and to Democritus was a well established one. Cf. especially Aristoxenus' story (*ap.* D. L. 9.40 = *VS* II 82.38–83.2) of how the two Pythagoreans Amyclas and Cleinias dissuaded Plato from burning the writings of Democritus.

CHAPTER NINE

DEMOCRITEAN SOCIOLOGY AND HISTORY IN THE DEVELOPMENT OF GREEK THOUGHT

If the argument of the preceding chapters is correct, we must assume that there arose in Greece toward the end of the fifth century a theory of cultural origins which was vastly more elaborate and subtle than anything which preceded or followed it, but which largely disappeared from philosophic discussions almost as soon as formulated. The phenomenon may seem unlikely; it is certainly remarkable—hence the attempt, in this and the following chapter, to explain why Democritean thought appears so rarely in later writers and why it appears in the places and forms in which it does.

A simple, though only partial, answer to the first problem lies in the uncompromisingly naturalistic character of our theory, which could be expected to fare ill in an age dominated by the teleology of Aristotle and the idealism of Plato. But there were certainly non-teleological schools of thought in the fourth and later centuries: the Cynic, the Sceptic, the Epicurean—even the Lyceum during a certain phase of its history. Their existence might have been expected to give a naturalistic doctrine a more vigorous life than our theory seems to have enjoyed. For a fully satisfactory explanation one must look elsewhere, to a sociological perspective and historical methodology which are characteristic of our texts and which, if not peculiar to the late fifth century, are nevertheless at home there in a way they are in no other period.

The perspective with which we have to deal is most evident in the psychological analysis of the phenomenon of community that our texts offer. The social aggregations whose formation is described in Polybius VI rest, in the first place, on a certain natural affinity between man and man: the atomic principle of like-to-like operates here as it does on all levels of existence. But this affinity in its purely natural form is very weak: the first men, though they may feel more comfortable among their fellows than elsewhere, are almost as likely to eat each other as not. A fully developed social feeling comes only later, as a product of the habit of association which man's physical weakness and sexual needs force upon him, and of a quite calculating realization that cooperation is more advantageous than aggression.

Once acquired, however, this sociability is capable of intensification and extension. As our study of the accounts of Polybius VI and *Laws* III has shown, it seems to have been regarded as linking, first comrades and kinsmen, then fellow-citizens, and finally whole cities in an expanding nexus of *koinôniai*.

Although no complete analysis of the social process developed along these lines survives elsewhere, enough of its elements appear in one form or another in the literature of the late fifth and fourth centuries to make it clear that Polybius' view of community (though not his analysis of the historical process by which community came into being) was fairly widely held during the period. Xenophon, for example, shares with Polybius the utilitarian analysis of social morality (the *Memorabilia* being a *locus classicus* in antiquity for this point of view); and his ethical theory, like that of Polybius, mingles *utile* and *dulce*. Proximity and common habits breed affection, and the process is observable in the behavior of both men and animals.[1] The latter point, implicit in Polybius (see above, pp. 87–88), is made explicit by Xenophon.[2]

The idea is certainly not original with him. Hesiod (*Works and Days* 276–78) found only *allêlophagia* in the ways of animals toward one another, but by the end of the fifth century Euripides could take a more optimistic view (Andromache is condemning remarriage):

> ἀλλ' οὐδὲ πῶλος ἥτις ἂν διαζυγῇ
> τῆς συντραφείσης ῥαδίως ἔλξει ζυγόν,
> καίτοι τὸ θηριῶδες ἄφθογγον τ' ἔφυ
> ξυνέσει τ' ἄχρηστον τῇ φύσει τε λείπεται.[3]

The last two lines suggest what Polybius states, that human behavior, though rooted in the same natural tendencies as that of animals, is (or ought to be) different by reason of man's intelligence (*synesis* in Euripides; *logismos* in Polybius).

Also in Xenophon (*Oec.* 7.18–32) is the attempt, if not to trace social morality to a "natural" origin in the family, at least to show how a principle of wide social application, that of the division of labor, arises out of the

[1] *Cyrop.* 2.1.25, 8.7.14. Cf. also Plato, *Laws* 708C: τὸ ἓν τι εἶναι γένος ὁμόφωνον καὶ ὁμόνομον ἔχει τινὰ φιλίαν, and, for the importance of *philiai* of this sort in fifth and fourth century society, F. Dirlmeier, *ΦΙΛΟΣ und ΦΙΛΙΑ in vorhellenistischen Griechentum* (Diss. Munich 1931) 37–39.

[2] *Cyrop.* 2.1.28; *Mem.* 2.3.4. Cf. also Aristotle, *HA* 9.611A7–11 and 629B10–12.

[3] *Troades* 669–72. Cf. the story in Plutarch (*Soll. anim.* 13.970AB) and Aristotle (*HA* 5.577B30–78A1) of the mule employed in carrying building material for the Propylaeum who, after being released as too old for work, continued of his own accord to run alongside his former companions and so was granted maintenance at public expense as a reward for *philotimia*.

natural union of man and wife and the resultant specialization which assigns home and farm as their respective provinces.[4] Given the association of the ideas of political and domestic economy which appears time and again in the works of Plato and Xenophon,[5] the parallel between state and family was doubtless on occasion drawn more explicitly. It appears in clear and striking form, though in a rather different context, in a passage from the anonymous second speech against Aristogeiton (Ps.-Demosthenes 25).[6] It is there maintained (87–89) that the willingness to overlook those actions on the part of one's neighbors which are merely personally displeasing is essential to the healthy life of the city; and it is suggested that civil life at this point should model itself upon the similar tolerance which characterizes the relationship between fathers and children.[7]

For the larger forms of community based on shared attitudes and habits one may compare Isocrates' famous praise of Athens (*Paneg.* 50) as having made the word "Greek" synonymous, not with a race, but with a way of life; or his mention, in a passage full of pan-Hellenic sentiment, of the

[4] Xenophon's perspective is teleological and theological: the varying natural capacities of man and woman are an indication of the fact that God has provided for the well-being of both. But this perspective need not be the original one. Cf. Ps.-Aristotle, *Oec.* 1.1343B13–20 (cited above, Chap. VIII, note 22, for its similarity to Polybius 6.6.2–5 and Democritus B278) and *EN* 8.1162A19–24, which contrast animal *synousia* (existing only for *teknopoiia*) and its human counterpart (involving a division of labor and exchange of needed services). In neither of these passages are there any theological or teleological overtones.

[5] Cf. *Mem.* 3.4.6, 3.6.14; Plato, *Meno* 73A, 91A; and the *epangelma* of Protagoras in *Prot.* 318E–19A. The parallel between *oikos* and *polis* is also in Aesch. *ctes.* 78. The idea, of course, is implicit in the very term *oikeios*, with its extension of meaning to include fellow-citizens and fellow-nationals as well as members of the same household. For representative examples of the two usages see J. P. A. Eernstman, *OIKEIOΣ ETAIPOΣ EΠITHΔEIOΣ, Bijdrage tot de kennis van de terminologie der vriendschap bij de grieken* (Diss. Utrecht 1932) 5–12.

[6] This passage, along with a number of others, was assigned by M. Pohlenz, "Anonymus *περὶ νόμων*," *NGG* 1924 19–37, to an anonymous fourth century political treatise. (The passages are reprinted in M. Untersteiner, *Sofisti, Testimonianze e Frammenti* 3 [Florence 1954] 193–207.) The attribution has been questioned (notably by M. Gigante, *NOMOΣ BAΣIΛEYΣ* [Naples 1956] 268–92) because of the somewhat contradictory views appearing in different portions of the material assigned by Pohlenz to the Anonymus. Whether the passage with which we are concerned is from a political treatise or not, it is reasonable to assume that its point of view played a role in the political discussions of the time.

[7] The set of ideas with which we are concerned is obviously related to two other views of *philia* current in the fifth and fourth centuries—the one which derives *philia* from *syngeneia* (on which see Dirlmeier [above, note 1] 7–21), and the one which explains it as a manifestation of the universal attraction of like for like (see R. Walzer, "Magna Moralia und Aristotelische Ethik," *NPU* 7 [1929] 245–46). For *syntrophia* and *synêtheia* are frequent concomitants of *syngeneia* as well as a form of *homoiotês*. But in both instances there is a difference. *Syngeneia* is static and *kata physin*; *synêtheia* is evolving and *kata nomon*. And the friendship based on *synêtheia* and *syntrophia* is a very special illustration of the *ὅμοιος–ὁμοίῳ* principle, which is in itself too vague to provide a consistent theory of human *koinônia* (see below, note 23).

Piraeus as an emporium, not of Athens, but of all Greece by reason of the exchange of needed commodities which goes on there.[8]

The single author who provides the most extensive record of this attitude toward community and amity is Aristotle, in the portions of his ethical treatises which deal with *philia*. The feelings of good will which exist between associates of all kinds—kinsmen, soldiers, fellow-voyagers, club members and the like—are cited from time to time in the course of Aristotle's attempt to analyze the sources of friendship; and the explanations offered frequently suggest the line of reasoning present in Polybius: membership in the same species, common habits and nurture, cooperation in securing the necessities of life.[9] That such forms of *koinônia* may serve as a basis for larger social entities is implied by several passages which refer to them as examples either of *politikê philia* or of those friendships which are "component parts" of *politikê philia*.[10] "Political" friendship is presumably that on which the *polis* rests, though Aristotle extends the term to include international alliances.[11]

The fact that Aristotle provides fairly extensive statements of the ideas which lie behind the Polybian and Democritean view of the social process need not mean that he contributed substantially to their expansion and development. There are such expansions in the *Ethics*, but they take a rather different line. Aristotle himself seems to have been rather uninterested in the sort of relationship which rests on habit and the exchange of utilities. It figures in his work chiefly in discussions of the lower forms of friendship—those based on τὸ χρήσιμον or τὸ ἡδύ rather than on τὸ ἀγαθόν.[12] The last,

[8] *Paneg.* 42. The statement comes at the end of a discussion of Athens' contributions to civilization which shows clearly the influence of fifth century *Kulturgeschichte*: Athens gives men religion and agriculture, the two boons which free him from an animal-like existence (28–29); the first men did not find things as they are now but devised them gradually, a process in which the Athenians, who by common consent have the greatest aptitude for technology, must have played the leading role (32–33); Athens founded the first city, established laws and government, and so substituted reason for violence in the settlement of men's disputes (39–40: noted above, Chap. VI, note 23). Here, as in *Laws* III, the extending and tightening of the bonds of *koinônia* is associated with the overall evolution of human culture.

[9] Cf. *EN* 8.1161B33–35: μέγα δὲ πρὸς φιλίαν καὶ τὸ σύντροφον καὶ τὸ καθ' ἥλικα· ἥλιξ γὰρ ἥλικα καὶ οἱ συνήθεις ἑταῖροι; 1159B27–29: προσαγορεύουσι γοῦν ὡς φίλους τοὺς σύμπλους καὶ τοὺς συστρατιώτας, ὁμοίως δὲ καὶ τοὺς ἐν ταῖς ἄλλαις κοινωνίαις, and the whole chapter (1159B25–60A30) from which this passage is taken; 1162A9–14: ἔστι δὲ φιλία . . . μᾶλλον ἐν τοῖς ὁμοίοις, ὅσῳ οἰκειότεροι καὶ ἐκ γενετῆς ὑπάρχουσι στέργοντες ἀλλήλους, καὶ ὅσῳ ὁμοηθέστεροι οἱ . . . σύντροφοι καὶ παιδευθέντες ὁμοίως; 1161B6–7: friendship links every man πρὸς πάντα τὸν δυνάμενον κοινωνῆσαι νόμου καὶ συνθήκης; and the proverbs κολοιὸς παρὰ κολοιόν, ἄνθρωρος ἀνθρώπῳ, etc., cited to illustrate the ὅμοιος-ὁμοίῳ principle in *EE* 7.1235A4–13; *EN* 8.1155A32–35; *Rhet.* 1.1371B12–17.

[10] For the former expression cf. *EE* 7.1242A2, 1242B21–22, and *EN* 8.1161B13; for the latter, *EE* 7.1241B25 and *EN* 8.1160A8–9.

[11] Cf. *EE* 7.1242B23–25.

[12] For the position of *politikê koinônia* among those based on ἡδύ or χρήσιμον, cf. *EE* 7.1242A6–8, 1242B22–27, and *EN* 8.1160A11–21.

which occupies the position of honor in his treatment, can only exist between good men, hence has little to do with most of the relationships which go under the name of *philia*.[13] And even if one leaves out of account the higher forms of *philia*, most relationships will be complicated in a way not envisioned by Polybius by the relative worths of the parties involved: there can rarely be the simple exchange of services or feelings of good will with which the latter deals. The better must receive a return for his participation which is in proportion to his own greater merits.[14] Thus, insofar as it applies to individual relationships, the sort of *koinônia* with which Polybius is primarily concerned is one about which Aristotle has strong reservations; and its social implications receive very scant treatment, the whole theory of the expanding circle of reciprocal ties and affections being merely hinted at in the term *politikê philia*.[15]

[13] For Aristotle's condemnation of the latter, see Dirlmeier (above, note 1) 76, with the passages cited there.

[14] For "friendships" based on the relationship between superior and inferior see *EE* 7.1238B18–39B5, 1241B33–40, 1242A2–6, and 1242B2–21; *EN* 8.1158B11–59A33, 1162A34–B4, and 1163A24–B27.

[15] Aristotle associates the notion of *politikê philia* with another, found here and elsewhere in his work (most strikingly in the early chapters of the *Politics*: cf. especially 1.1259A37–B17), which makes the family the archetype of the *polis*, the *polis* a sort of family writ large. But the two conceptions are essentially different. *Politikê philia* is a relationship between equals (cf. *EE* 7.1242A9–11: other *philiai* are all *καθ' ὑπεροχήν*—only *politikê philia* is not merely friendship but a partnership of friends [i.e. equals—cf. 7.1239A4–5: *αἱ μὲν γὰρ φιλίαι κατὰ τὸ ἴσον, αἱ δὲ καθ' ὑπεροχήν εἰσι. φιλίαι μὲν οὖν ἀμφότεροι, φίλοι δ' οἱ κατὰ τὴν ἰσότητα*]; 1242B21–22: *ἡ δὲ κατ' ἴσα φιλία ἐστὶν ἡ πολιτική*; and *EN* 8.1161B13: *politikai koinôniai* linked with *phyletikai* and *symploikai*). When Aristotle speaks of *politikê philia*, the *politeia* he has in mind is any kind of commonwealth—anything that is not monarchy or "dynastic" oligarchy. The *politeia* of which the family is the archetype is, on the other hand, any one of the three sound constitutions (monarchy, aristocracy, timocracy) envisioned by the Aristotelian scheme of classification or any one of their corrupt aberrations (tyranny, oligarchy, democracy). And the relationships of master to slave, father to son, husband to wife, or brother to brother which have their counterparts in the various forms of *politieia* are, for the most part, authoritarian ones—varieties of *φιλία καθ' ὑπεροχήν* (see preceding note). The two conceptions are clearly separated in the *Eudemean Ethics*, *politikê philia* never being identified with *syngenikê philia* in its authoritarian forms. The *Nicomachean Ethics* is less careful, inserting (1159B35–60A3) a mention of the father-son relationship into a section (1159B25–60A30) which is largely concerned with various egalitarian *koinôniai* which are "components" of the "political" one (see above, note 10). The parallel between *oikos* and various *politeiai* is developed at greater length in the latter work (*EN* 8.1160A31–61A30 = *EE* 7.1241B27–40 and 1242A27–B2)—hence, perhaps, its encroachment on the other set of ideas. The two conceptions stand in roughly the same relationship to each other as do the Polybian and Platonic notions of the expanding range of *koinônia* (see above, pp. 115–17). The various egalitarian *koinôniai* of a commonwealth are quite literally "portions" of a larger civic one: all individual groups are linked eventually to all others by ties of *philia*, and it is possible to conceive the actual stages by which an ever increasing number of them could be brought into an expanding and tightening social nexus. There are no comparable relationships of seniority and authority between families in an aristocratic or monarchic state; and though it would have been possible to envision the descendants of a single patriarch multiplying to produce a state, neither Plato nor Aristotle seems to have done so. The union of clans in *Laws* III proceeds on egalitarian principles (see above, p. 117), as does the union of tribes and phratries from which Aristotle's pupil Dicaearchus derives the *polis* (Fr. 52 Wehrli).

These considerations, along with the specific references to, or echoes of, earlier writers which appear in Aristotle's discussion,[16] make it fairly clear that he is here drawing heavily, if not exclusively, on what must have been a fairly widespread set of ideas by the middle of the fourth century,[17] one which may have found an extensive application in the Democritean theory of the origin of society.

These ideas do not, however, seem to have been important in the philosophical discussions of subsequent periods. In Aristotle himself, as we have seen, they have been largely superseded by a very different conception, of largely Platonic ancestry,[18] which makes friendship a partnership based on dedication to what is *agathon.* The Aristotelian notion was to persist in the Hellenistic period[19] alongside another, which is separated from the fourth century view by differences more subtle but just as significant.

This is the notion of a natural, absolute unity of mankind which dominates the classic Peripatetic and Stoic theories of community.[20] These theories are

[16] Cf. *EN* 8.1155A32 (=*EE* 7.1235A4–5), where the ὅμοιος–ὁμοίῳ interpretation of *philia* is introduced as an opinion held by one group as against those who suppose friendship to stem from attraction between *enantia.* (For Aristotle's transformation of the controversy to fit his own ἡδύ–χρήσιμον–ἀγαθόν classification, see Walzer [above, note 7] 250.) References to the work of predecessors is probable, though less certain, in the *dokei* with which many of the doctrines discussed by Aristotle are introduced (see Havelock, 317); and the fifth century parallels to what is said in *EE* 7.1236B9–10 about the "comings together and partings of birds that soothsayers speak of" (cf. Aeschylus, *PV* 491–92) and the friendship of sandpiper and crocodile (cf. Herodotus 2.68) suggest use of an earlier literary source—perhaps a work on *philia.*

[17] See Walzer (above, note 7) 250; Dirlmeier (above, note 1) 20 (on the antecedents of Aristotle's treatment of *syngenikê philia*); and, most extensively, Havelock, 295–326. In analyzing large portions of Aristotle's treatment of friendship as the result of the modification and "correction" of the view of previous thinkers, Havelock seems to me to be quite correct, though one might quarrel with certain details of his interpretation. In particular, I would question the contrast he draws (298) between the *philia* which is conceived as an "intimate understanding, a meeting of minds and matching of characters" (Aristotle) and *philia* as "a spontaneous feeling of sympathy or goodwill which all members of a species are supposed by definition to feel for each other . . ." (the fourth century view). Earlier thinkers tended, I believe, to be just as concerned as Aristotle with a "matching of characters"—though their frame of reference was social rather than individual. Although there is some evidence for the existence, before Hellenistic times, of a theory of universal and spontaneous amity (see below, note 23), its influence seems to have been far more restricted than that of the view under discussion in the text.

[18] Cf. *Lysis* 214CD; *Rep.* 350B, 351CE; *Laws* 837A.

[19] It forms, for example, a major theme in Cicero's *Laelius.*

[20] These theories have been the subject of extensive investigation in recent years: see H. von Arnim, "Arius Didymus' Abriss der peripatetischen Ethik," *SBWien* 204.3 (1926) 144–46; Walzer (above, note 7) 260; Tarn, *ProcBritAc* 19.140–45; M. H. Fisch, "Alexander and the Stoics," *AJP* 58 (1937) 149–50; Dirlmeier, *Philologus* Suppl. 30.1; Philippson, *Philologus* 87.445–66; Pohlenz, *AbhGöttingen,* Folg. 3, 26; R. Stark, *Aristotelesstudien=Zetemata* 8 (1954) 60; Brink; and Baldry, *The Unity of Mankind in Greek Thought* 142–44, 178–83. The discusssion in the text follows Pohlenz (12–14) against Dirlmeier (47–75) in distinguishing *oikeiotês* from *oikeiôsis* and in recognizing the latter as a specifically Stoic doctrine. (A similar point had been made earlier by Walzer and Philippson [464–65] against von Arnim, and by Fisch against Tarn.) I assume with Brink (138, note 83) against

the ones most frequently cited in discussions of ancient *humanitas* and are at times compared, erroneously, with what appears in Polybius.[21] The Peripatetic position seems to have been first stated fully by Theophrastus, fragments of whose discussion survive in Porphyry.[22] These passages develop the idea of the essential unity of mankind, supporting their contention with references to the presence of similar biological needs, feelings, and perceptions in all men, who are thus *oikeioi* to one another. The unity which they envision is an absolute and universal brotherhood: a fellowship linking every member of the race to every other *qua* man.[23] There is no suggestion, either here or in the account of the doctrine which appears in Arius Didymus'

Pohlenz (12) that the *oikeiotês* of Theophrastus is not simply a biological fact but the feeling of kinship to which the former gives rise.

[21] See Appendix III.

[22] *De abst.* 3.25 = *Περὶ εὐσεβείας*, Fr. 20 Pötscher; cf. Bernays, *Theophrastos' Schrift über Frömmigkeit* 96–100.

[23] Tarn seems to me to be largely correct in insisting (*ProcBritAc* 19.124–26) that this idea is not attested before Alexander. The passages which can be cited to prove the contrary are either negative in their emphasis, calling attention to the absence of physical differences between Greeks and Barbarians (Antiphon, *VS* 87B44, Fr. B, col. 2.15–35), or to the non-existence of natural slavery (Alcidamas, as preserved by the scholiast to Arist. *Rhet.* 1.1373B18), or else simply concerned with certain general rules which have a validity not limited by time and place (the *agraphoi nomoi* discussed in Xenophon, *Mem.* 4.4.19–25, and Aristotle, *Rhet.* 1373B7–18, or abstinence from homicide; for the latter cf. Empedocles *ap.* Arist. *Rhet.* 1373B14–17 and Sextus Empiricus, *Adv. math.* 9.127, Xenocrates, Fr. 98 Heinze, and, for the position attributed to Pythagoras, Iamblichus, *VP* 108). At most they suggest universal equality, not fraternity. The *ὅμοιος–ὁμοίῳ* theory (above, note 7) could be, of course, and eventually was, put to the service of a genuine doctrine of the unity of mankind, but it could just as easily justify racial or local particularism. *EN* 8.1155A21–22, *ἴδοι δ' ἄν τις καὶ ἐν ταῖς πλάναις ὡς οἰκεῖον ἅπας ἄνθρωπος ἀνθρώπῳ καὶ φίλον*, is the only passage in which the Hellenistic universalism is clearly foreshadowed, and it does not prove that the idea was already well developed in Classical times.

It should be emphasized, however, that the transition to the new conception must have been a natural and gradual one. By the middle of the fourth century certain circles of the Greek community had accepted a view which placed no bar in principle on the unity of mankind; for the community of acquired habits and exchange of utilities on which *philia* is based are open potentially to all men (cf. *EN* 8.1161B6–7 on friendship *πρὸς πάντα δυνάμενον κοινωνῆσαι νόμου καὶ συνθήκης*, in which the position of one of the Hellenistic schools has already been reached: cf. Epicurus, *RS* 32). If no one talked of universal *philia* it was simply because no one dreamed that the situation in which such could exist would ever arise. Alexander's conquests created such a situation, and it is reasonable to suppose that it was his action rather than any revolutionary ideal of *koinônia* introduced by him which led to the appearance of universalistic ideas in the generations following him. Once a mingling of habits and sharing of utilities throughout the *oikoumenê* became possible, it was natural, on fourth century principles, to assume that *philia* would follow. Alexander may have drawn the logical conclusion at about the same time as a number of his contemporaries. Of the various views on the subject attributed to him (Arrian 7.11.9; Strabo 1.66; Plutarch, *Fort. Alex.* 329CD, *Alex.* 27), only the last, which proclaims all men to be children of earth and heaven, can be interpreted as an affirmation of the absolute, abstract unity which was to figure in Hellenistic thought; and taken in context the statement reads as little more than a variant on the traditional view of Zeus as *πατὴρ ἀνδρῶν τε θεῶν τε* (see E. Badian, "Alexander the Great and the Unity of Mankind," *Historia* 7 [1958] 426–27). The others refer, not to an existing brotherhood, but to one which Alexander proposes to create—probably by acts like the resettlements and intermarriages of Diodorus 18.4.4

summary (Stobaeus, *Ecl.* 2.7 = W-H II 120.17–121.21) of Peripatetic ethics, that the feelings of community which link all men might be a variable quantity whose intensity and very existence depend upon a prior process of association and assimilation.[24] Nor is the absence strange: such a notion would be inconsistent with Aristotle's whole conception of "man" as a distinct and fixed species, "political" by its very nature and capable of deviation from this norm only at the price of ceasing to be human altogether.

A similar tendency to view human nature as a constant is evident in the doctrine of *oikeiôsis*, which plays a central role in the Stoic ethic.[25] The unity of the human race figures here in two different ways. The mainspring of human motivation is, for the Stoic, an innate οἰκείωσις πρὸς ἑαυτόν, which makes every creature from the moment of its birth favorably disposed toward himself, his own preservation, and whatever external things are necessary for his well-being. Connected with this is a similar *oikeiôsis* toward his fellows who, by virtue of generic resemblance, occupy a lesser place in his affections. Hence man's character as a ζῷον συναγελαστικόν.[26]

(cf. in Plutarch, *Fort. Alex.* 329D, μείξας τοὺς βίους καὶ τὰ ἤθη καὶ τοὺς γάμους καὶ τὰς διαίτας), which would extend the effects of *synêtheia* and *syntrophia* to the whole world. The first person to have taken the idea of Zeus as a common father seriously may have been Cassander's eccentric brother, Alexarchus, who was allowed to found and rule a colony of "children of Uranus"—perhaps a miniature model of a world state (cf. Tarn, 141–45). The Stoics and Peripatetics provided a more sophisticated justification for something whose possibility had been revealed in practice. In building their own theories, however, they largely disregarded the ladder of expanding *koinôniai* by which the Greeks had ascended to the cosmopolitan thought and practice of the Hellenistic age. The nature of which they speak in proclaiming the natural unity of mankind tends, as a result, to be largely an ideal human nature; and it was perhaps only with the advent of Rome and the realization of that political and economic unity whose possibility was first revealed by Alexander that philosophers began to speak with real conviction of an actually existent world community. For the contrast between third and first century treatments of the theme see Baldry, *The Unity of Mankind in Greek Thought* 141–45, 151–66, and 177–99.

[24] Theophrastus, it is true, speaks of fellow-citizens as οἰκείους . . . τῷ τῆς τε γῆς καὶ τῆς πρὸς ἀλλήλους ὁμιλίας κοινωνεῖν (Fr. 20.4–5 Pötscher), but this is an isolated reference in a passage dedicated wholly to *syngeneia* or to such *ethos* and *trophê* as all mankind has in common. Moreover, there is no suggestion that the smaller groups with which he deals are component and prior parts of the larger ones. The perspective throughout is biological, tracing the various metamorphoses of *oikeiotês*—not, as is that of the fourth century theory of expanding *koinôniai*, atomistic.

[25] The most extensive of surviving presentations is Hierocles, col. 6.22–11.21. For a brief survey of other texts see Pohlenz, *Die Stoa* 2.65–66.

[26] Cf. Cicero, *Fin.* 3.62–63 (= *SVF* 3.340); Berlin Theaetetus Commentary, cols. 7.26–8.1; Hierocles 11.13–21. This extension of *oikeiôsis* to include one's fellow men is not found in Chrysippus, who says only (*SVF* 3.179) οἰκειούμεθα πρὸς αὑτοὺς εὐθὺς γενόμενοι καὶ τὰ μέρη καὶ τὰ ἔκγονα ἑαυτῶν. Conceivably it entered the school at a later date, perhaps as a result of Peripatetic influence (cf. Brink, 138 and 140–41). The germ of the idea is already present in Aristotle's analysis (*EN* 9.1170A25–B19) of the pleasure which all men, and in particular *agathoi*, derive from consciousness of their own existence. The pleasurable *aisthêsis* which in each individual is directed toward himself is linked to a *synaisthêsis* whose object is one's *heteros autos*—the friend. The latter's existence is therefore, like one's own, numbered among things to be sought after for their own sake.

But *oikeiôsis* operates in another manner as well. The self which forms its object is in the process of evolution toward maturity and completeness, its natural and preordained *telos*; hence man's concern soon ceases to be mere physical preservation and well-being, but rather the well-being of his perfected rational nature.[27] And since such a nature does not exist in isolation but is linked to its fellows throughout the cosmos and benefited by whatever benefits them (*SVF* 3.625–27), the eventual result of *oikeiôsis* is a rational awareness of the unity of the human race, or at least of the *spoudaioi* who are members of it (*SVF* 1.222–23).

The Stoics may thus be said to recognize an *oikeiôsis* linking all men, which exists on the level both of impulse and reason.[28] But neither variety undergoes the sort of evolution envisioned in earlier theories of community.[29]

[27] *SVF* 3.178: *τεχνίτης γὰρ οὗτος* [*λόγος*] *ἐπιγίνεται τῆς ὁρμῆς*; Seneca, *Ep.* 121.15: "unicuique aetati sua constitutio est, alia infanti, alia puero, alia seni: omnes ei constitutioni conciliantur in qua sunt"; Cicero, *Fin.* 3.23: "quemadmodum fit ut is qui commendatus sit alicui pluris eum faciat cui commendatus quam illum a quo sit, sic minime mirum est primo nos sapientiae commendari ab initiis naturae, post autem ipsam sapientiam nobis cariorem fieri quam illa sint a quibus ad hanc venerimus."

[28] The contrast drawn here between a "natural" and a "rational" *oikeiôsis* (on which cf. Fisch [above, note 20] 149–50) is not found in any ancient text. They represent two currents in Stoic thought about community, rather than the two halves of a single, well articulated theory. One could be stressed at the expense of the other; or the same phenomenon explained in terms of both; cf. Cicero, *Off.* 1.12: *natura vi rationis hominem conciliat homini*, and, in the Berlin Theaetetus Commentary (col 5.36–39): *ἡ μὲν γὰρ πρὸς ἑαυτὸν οἰκείωσις φυσική ἐστιν καὶ ἄλογος, ἡ δὲ πρὸς τοὺς πλησίον φυσικὴ μὲν καὶ αὐτή, οὐ μέντοι ἄνευ λόγου.*

[29] To the generalization in the text there are two exceptions, or seeming exceptions, important enough to require notice here. An Epicurean doctrine preserved most completely by Cicero, *Fin.* 1.69 (see above, Chap. VI, note 12), holds that *amicitia*, though based ultimately on utility, comes in the course of a relationship to be sought for its own sake because of the *familiaritas* which *usus* brings about: "si loca, si fana, si urbes, si gymnasia, si campum, si canes, si equos, si ludicra exercendi aut venandi consuetudine adamare solemus, quanto id hominum consuetudine facilius fieri poterit et justius?" This theory, however, is described by its proponent (Velleius) as the work of certain *timidiores Epicurei* who were seeking an answer to the charge that the ethic of the school made insufficient allowance for the claims of friendship; and in the next book it is dismissed by Cicero as a later addition to the tenets of Epicurus: *aliud humanius . . . recentiorum, numquam dictum ab ipso illo* (2.82). The accuracy of the statements of Velleius and Cicero has been challenged (see Bignone, *RFIC* 37.77–78), but even if something comparable to *Fin.* 1.69 appeared in Epicurus himself it is unlikely to have been part of his main line of thought on the subject of friendship.

More incontestably part of a major doctrine of an important thinker is the theory put forward in Cicero, *Off.* 1.54, which traces a widening circle of human *coniunctiones* beginning with *coniugium* and proceeding through *domus, fratrum coniunctiones*, and *adfinitates* to *res publica*. The passage makes explicit the role played by *synêtheia* in the whole process: *oratio* (1.50), *forum, fana, porticus, viae, leges, iura, iudicia, suffragia* (1.53), *sepulcra*, and *monumenta maiorum* (1.55) are all named as things whose sharing goes to make up that *vita victusque communis* and *similitudo morum* (1.58) on which *amicitia* rests. To this are added the giving and receiving of needed services. (1.56: "communitas . . . quae conficitur ex beneficiis ultro et citro datis acceptis"; cf. also 1.22–23: "debemus . . . communes utilitates in medium adferre mutatione officiorum, dando accipiendo, tum artibus, tum opera, tum facultatibus devincire hominum inter homines societatem." *Fin.* 2.45 and 5.65, often cited as a parallel to *Off.* 1.54, speak in a superficially similar way of a widening circle of friendships, but

Oikeiôsis is an implanted feeling of affinity, never the product of custom and habit. *Oikeiôsis pros heauton* is not directed toward the acquired complex of habits, activities, and feelings which becomes associated most intimately with one's personal existence; rather, it rests on an innate consciousness of oneself as a separate being, which exists in a confused form even in animals and children.[30] Its extension to include one's fellow creatures is equally natural and immediate. *Oikeiôsis* on the rational level is the product of development and self-realization, but the change is not one which brings with it a heightened sense of kinship bred by long contact: *oikeiôsis* is automatically redirected to the rational self as it begins to emerge.

The Polybian analysis of community would seem to be one which became rather unusual after the middle of the fourth century, at least in Greek thought at its more sophisticated levels. What distinguishes Polybius from his contemporaries and links him to an earlier age is, quite simply, his sense of society[31]—his recognition of the fact that individual character cannot remain constant as long as it continues to be involved in the social process, that *nomos* counts for as much as, or more than, *physis* and *logos* in human behavior.[32] The Peripatetic *oikeiotês*, by contrast, exists only on the level of *physis*, linking all men to one another by virtue of common traits which all

there is nothing in either of the former two passages to suggest the possibility of psychological development. The various relationships mentioned are simply the successive manifestations of a natural instinct which remains constant from the start.) It is clear that the *oikeiôsis* doctrine of *De officiis* I involves what has been termed the fourth century view of *koinônia*, but it is almost as clear that the doctrine is foreign to early Stoicism. Cicero's source here is Panaetius, whose eclecticism was notorious (*Fin.* 4.79); and it is probable that Panaetius has modified the orthodox *oikeiôsis* theory with material drawn from other sources. The innovations stress the more concrete, immediate forms of *koinônia* at the expense of the cosmic unity envisioned in other presentations of the doctrine. They are thus quite in keeping with the "humanizing" of the Old Stoic teaching evident throughout the work of Panaetius. It has been suggested (Brink, 138) that Panaetius was indebted to the Theophrastan doctrine of *oikeiotês* for the changes he introduced, and the succession of *koinôniai* mentioned in *Off.* 1.54 bears a certain resemblance to that traced in Dicaearchus (Fr. 52 Wehrli). But Panaetius' strong evolutionary perspective, to which there is no parallel in either Theophrastus or Arius (see above, pp. 137–38, with note 24), and his equally strong emphasis on the *utile* as a *vinculum societatis* suggest to me a different source: Aristotle, perhaps, or the earlier thinkers on whose theories of *koinônia* Aristotle seems to have drawn (see above, p. 136, with notes 16 and 17). For Panaetius' acquaintance with pre-Platonic thought see the notices regarding his studies of the Socratics (D. L. 2.85 and 64=Frs. 123–24 van Straaten); Cole, *HSCP* 65.128–44 (parallels between *De officiis* II and the Anonymus Iamblichi); and A. Grilli, *Il problema della vita contemplativa nel mondo greco* (Milan 1953) 137–61 (Panaetius and the Democritean ideal of *euthymia*).

[30] Seneca, *Ep.* 121.13: "infantibus quoque animalibusque principalis partis suae sensus est non satis dilucidus nec expressus."

[31] On Polybius' "soziologischen Betrachtungsweise" see Heinemann, *Poseidonios' metaphysische Schriften* 1.107.

[32] *Nomos, synêtheia*, and *ethismos* continued to play a role in the speculations of Hellenistic ethnographers, if Agatharchides is at all typical (see O. Immisch, "Agatharchidea," *SBHeidelberg* 10.7 [1919] 107, and Dihle, *Entretiens Hardt* 8.223–24). But in what survives of his work, at any rate, Agatharchides falls back on *synêtheia* as an explanation only when he has to account for what

of them share at all times. And Stoic *oikeiôsis* merely adds to a purely natural affinity an equally universal intellectual one stemming from man's consciousness of his rational nature.

A similar polarization of phenomena into the realms of *physis* and *logos* distinguishes the Epicurean treatment of the origin of society and language from its counterparts in Polybius and Diodorus. Language and morals arise first by an automatic association between objects and sounds or between certain activities and the idea of survival; then a fully developed *logismos* enters in to improve and regularize the natural situation. In Polybius and Diodorus, on the other hand, linguistic and social usage is built up gradually, the product, not simply of instinct, but also of the particular situations out of which the impulse for their development originally comes and of the habits which arise gradually out of a series of such situations. *Logismos* in a rudimentary form plays a role, but it is only at a much later stage—when the establishment of government makes it the basis of political and social action, or when the merging of two different tribes requires the assimilation of already developed dialects (see above, pp. 108–9)—that intellectual factors become the predominant ones. Polybius himself is not entirely free from the contemporary tendency to encroach on the realm assigned to custom and habit: what is *nomizon* in Democritus becomes in his account an *ennoia* (see above, pp. 113–14). But this influence does not extend to more than the terminology used in certain passages.

Similar differences in viewpoint can be observed when one compares Polybius and the other texts of our tradition with the more historically minded of the passages considered in Chapter Three. Dissimilar as their approaches were, all of those passages were at one in refusing to recognize society as something *sui generis* and in dealing with it in essentially individualist terms. For Posidonius and the Euhemerists society becomes a mere projection of the individual: a group of disciples seated passively at the feet of *sapientes* or king. Dicaearchus and Aristotle do not conceive of society as a classroom; but for them the whole human race becomes a sort of corporate individual, looking around and taking stock of its environment, then exploiting in systematic fashion, first the vegetable, then the animal kingdom (see above, pp. 54–55);[33] or else directing its activities, along lines determined by the development of its own inner being, from preoccupation with utility and pleasure to disinterested speculation on nature and pure being (see above, p. 52). The attitude which lies behind such theories is perhaps

strikes him as an absurdity or aberration in the behavior of barbarian races (cf. Diodorus 3.6.2; 7.2; 18.7; 34.6=Photius, *Cod.* 250 455A11–12). There is nothing to suggest that he would have regarded civilized morality as depending ultimately on anything so variable and haphazard.

[33] As the title he chose for his work indicates, Dicaearchus is composing biography, not history.

best summed up in the observation with which Plato introduces his famous account of the degeneration of the ideal state: "There must be as many types of man as there are of polities," says Socrates, "—or do you fancy that polities arise out of stock or stone rather than from the character types existing within them which, through their preponderance, carry the others along with them?"[34] The implication is clear: whatever in the social process cannot be directly explained in terms of individual psychology has no explanation at all.[35]

But if Polybius refuses to view society in completely individualist terms, neither does he neglect individual motivation to concentrate exclusively on the working of social controls. He does not, like Pindar or Herodotus or Sophocles, speak of *nomos* as a king ruling unchallenged over men, its origin and nature shrouded in mystery.[36] Social norms arise from concrete situations in which individual choice plays an important, if not exclusive, role; and only subsequently, through diffusion and habit, do they become the rules of conduct to which all members in a society give automatic or nearly automatic obedience.

This aspect of his analysis serves to separate him from Greek thought prior to the late fifth century as much as his sociological perspective does from that of his Hellenistic predecessors and contemporaries. For it was in the late fifth century that Greek thinkers first began to view *physis* as something apart from *nomos*: as the complex of instincts, impulses, and mental processes common to all men apart from the particular social context in which they find themselves.[37] Typical of the new attitude in its various aspects are the remarks of the *Adikos Logos* on the freedom from social taboos which his pupil will enjoy if he follows the dictates of *physis* (Aristophanes, *Clouds* 1075–78), Thucydides' concern with the constant elements in human nature (1.22.4), and Antiphon the Sophist's distinction between "natural" wrong-doing—that which carries with it its own penalty—and the wrong-doing deemed to be so only by virtue of *nomos* (*VS* 87B44, Fr. A col. 1.1–2.20). Though the three differ radically in what they would take to be the central characteristics of human nature, they are at one in their belief that ἡ ἀνθρωπεία φύσις is

[34] *Rep.* 544DE. Cf. the similar remark à propos of Thracian and Scythian ethnic character at 435E.

[35] Cf. Wilamowitz's characterization of Plato's central innovation in Greek political theory: "Bald drang er zu der tiefsinnigen auffassung durch, dass die verfassungen bedingt sind durch die ganze geistige disposition der menschen, die sie sich machen, und demgemäss die veränderungen in der volksseele den wandel der verfassungen bedingen . . ." (*Aristoteles und Athen* [Berlin 1893] 184). For what may be a contemporary protest against this tendency in thought, see Lysias 25.8.

[36] On the conception see, most recently, M. Ostwald, "Pindar, *Nomos* and Heracles," *HSCP* 69 (1965) 124–31.

[37] On the late fifth century view of *physis*, see F. Heinimann, *Nomos und Physis = Schweizerische Beiträge zur Altertumswissenschaft* 1 (Basel 1945) 110–162, especially 125–47, on "das menschliche Triebleben" seen as "angeboren . . . und so entweder auf die Götter oder auf unausweichliche Naturgesetzlichkeit zurückgeführt" (126).

always the same in certain of its aspects, and that "natural" action is distinct from, though not necessarily contrary to, *nomos*. The Socratic doctrine of the soul reveals an essentially similar concern with separating the real and essential from the merely conventional. The *psychê* is the most important part of a man; its welfare has nothing to do with the external circumstances of a man's life; and by virtue of its possession each individual is linked with all other individuals regardless of the differences of habit or belief which separate them.

But Socrates' "discovery" of the self, while it involves the same preoccupation with the problem of *physis* which appears in other late fifth century writers and in Polybius, was eventually to make the sort of sociological analysis which Polybius gives difficult, if not impossible. Henceforth man the individual became the center of philosophic attention; and once this had occurred, it became increasingly hard to conceive the formation of character and personality as proceeding in accordance with anything but their own inner law. The social aspect of human existence becomes obscured by an overriding preoccupation with the individual and the universal. In finally gaining his own soul Hellenic man had lost the world—or at least the possibility of understanding it. Polybius' ability to include both within a single focus fairly well pinpoints his theory of society as a product of the intellectual atmosphere of the late fifth century—impossible before then and increasingly rare thereafter.[38]

The effects of the Socratic revolution were obviously not felt immediately: witness the texts cited above (pp. 132–34) for their parallels to the Polybian theory of *koinônia*, most of which come from the fourth century.[39] But if the perspective which characterizes Polybius continued to exist for some time after the intellectual events which were to lead to its virtual abandonment, the methodology he uses to construct a historical account embodying this perspective points unmistakably to the fifth, rather than to the fourth, century. Its affinities and possible antecedents are well illustrated by calling attention to a remarkable episode in the *History* of Herodotus.

The passage referred to (4.110.2–117) tells how a group of Scythians came to intermarry with a band of wandering Amazons. The latter, survivors from

[38] Polybius' perspective is succinctly present in the passage of Hippolytus which summarizes the *Kulturentstehungslehre* of another late fifth century thinker, Archelaus: "men were separated from the other animals and then developed leaders and lawful usages and techniques and cities . . ." (*VS* 60A4.6). The development of man is conceived in social rather than individual terms, but cities and lawful usages are things of his own devising.

[39] Also from the fourth century, of course, is the work which contains some of the most extensive of surviving discussions of the formative power of *nomos*—Plato's *Laws*. But Platonic *nomos* is the codification of a single *nomothetês* and so less intimately involved in the social process than is its Polybian counterpart.

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their unsuccessful fight against the Greeks, land near Lake Maeotis and wander inland to the inhabited portion of the country. At first, not recognizing the language, clothing, race, or sex of the invaders, the Scythians fight with them; then, discovering them to be women, their thoughts turn in another direction. A band of their young men is sent out with instructions to encamp near the Amazons, but not to fight with them, fleeing if attacked and encamping near them again once the pursuit is over. This is done, and when the Amazons discover that their neighbors mean them no harm they ignore them. Thus the two encampments gradually get closer, and for some time they share the same way of life, hunting and plundering. The Amazons have the habit of going out singly around noon to relieve themselves; on one such occasion a girl is assaulted by a Scythian and acquiesces. He indicates by gestures (for there is no common language between them) that he will bring a companion to the same spot the next day, and she agrees to do likewise. The process continues until all members of both groups are involved. The Amazons learn the language of the Scythians, but, rather than settle with a people whose ways they do not share, they persuade their husbands to migrate farther inland. Their descendants grow up speaking a slightly different dialect of Scythian, influenced by their mothers' mispronunciation of an acquired tongue.

There is nothing in the way this story is introduced to suggest that it is any different from the other tales, historical or fantastic, with which Herodotus adorns his account; but it bears the marks of being a thinly disguised piece of speculative ethnology. The protagonists of history and legend do not go about getting themselves wives in such roundabout and tedious fashion; but the form in which the episode is cast makes sense if one views it as an attempt to explain the phenomenon of tribal assimilation—an attempt which proceeds along lines quite similar to those present in the theory of society preserved in Polybius. Given the differences of language, clothing, and race which separate two ethnic groups of different origins, there is little chance of their mingling: the natural *oikeiotês* between all men is too weak to have any effect here. Proximity, however, and pursuing the same way of life (*synêtheia* and *syntrophia*) will, if aggression is not involved, lead two tribes to feel fairly secure in each other's presence. Gradually the necessary preconditions for rapprochement will arise. But whole social groupings do not change their way of existence at once. The process must begin with individuals in a specific situation. A separation of one of the girls from her companions such as is likely to occur in the normal course of things makes possible the first union between members of different tribes. The sexual act is a purely natural and universal form of *koinônia*—hence its position at the beginning of the process of social transformation both here and in Polybius. The new *synêtheia*

spreads from the isolated instance where it began until the two tribes are one and assimilation of language has occurred. The result is a new *ethnos*, speaking a dialect different from, though related to, those of the groups out of which it is formed.[40]

The theory on which Herodotus is drawing was clearly more limited in scope than the one which has served as the source for Polybius VI. But the resemblance is close enough to make it fairly obvious that elements, at any rate, of the Polybian view of social development existed in certain portions of fifth century literature. Perhaps the work or works in which they appeared were contemporary with the one on which Polybius draws; perhaps they belonged to an earlier stage of thought out of which the more elaborate and inclusive theory present in Polybius arose.

The parallels are all the more impressive for their being virtually unique—and it is probably not accidental that they occur in a fifth century text. For the type of reconstruction of the past which Herodotus and Polybius give has a definite archaic cast to it. It proceeds in accordance with a definite idea of which elements in human behavior are fixed and "natural" and which are acquired and "accidental," hence not to be taken for granted in an aetiological account which aims at being valid for all occurrences of the phenomenon it seeks to explain. But though both accounts (Polybius more clearly and self-consciously than Herodotus) are reconstructions of history in keeping with certain general principles, the form in which both are cast resembles the *aitiai* of poets and mythographers more than a philosophic exposition of the causes at work in history. The principles which both accounts recognize remain in the background. The center of attention is occupied, not by the interaction of universal and impersonal forces, but by a narrative of specific events involving individuals. What makes possible this combination of narrative and analytic elements in both authors is their reliance on the principle of probability (*eikos*):[41] since human behavior displays certain recurrent patterns, one is justified in singling out a certain sequence of specific events as the likely one and presenting it as true history. It should be realized that this method of speculative reconstruction of the past enjoyed a rather limited vogue in antiquity. The appeal to *eikos* was probably the most characteristic form of argumentation in the late fifth century, evident alike in drama, history, and oratory.[42] Its popularity may reflect a certain naiveté on the part of the audience for whom it was intended. Probable reconstructions like the Archaeology of Thucydides make considerable use of *tekmêria*; Polybius and

[40] Herodotus' account tends to confirm the conclusion reached in Chapter Eight (see above, pp. 109, 115–17) that Plato's account of tribal assimilation has arisen through a modification and correction of previous theories.

[41] For the term in Polybius, cf. 6.5.7, 5.9, 6.3, 6.4, 6.6, 6.8 (*eikos*); and 6.6.9 (*eulogon*).

[42] For its use in oratory and tragedy, see F. Solmsen, "Antiphonstudien," *NPU* 8 (1931) 53–58.

Herodotus are dealing with events for which few *tekmêria* exist, and as a result their reconstructions are somewhat hazardous. But this boldness would doubtless not have weighed heavily with a fifth century audience. Accustomed still to accepting the poets as authorities on past history, they would not be too insistent on the *tekmêria* which alone could insure that what they were hearing was a true account and not simply a likely tale. If the reconstruction were plausible, true to reality as they knew it, they would tend not to question it. Herodotus' transformation of ethnological theory into Scythian history shows how easily a *logos* constructed in accordance with the principle of *eikos* could be accepted in the same spirit as a *mythos*—and Herodotus was certainly not the least sophisticated member of his generation.

What evidence we have suggests that the appeal to *eikos* was much less popular in the fourth century: the decline in its use is clearly traceable in oratory,[43] and the Archaeology of Thucydides did not, so far as we know, find a successor. It is natural to associate the change with the growing prevalence of more conceptual modes of thought, a process which could be expected to bring with it a demand that reconstructions of the past take the form of principles, evidence, and inference, rather than that of the likely tale. Polybius' own account, as well as the technological and linguistic histories to which it is related, conspicuously fails to meet this demand; and the demand is met, just as conspicuously, by almost all the other accounts of technology and language with which our tradition was compared and contrasted in Chapters Three and Four. Characteristic of those accounts was their tendency to eliminate the vagaries of chance and individual whim which play so large a role in Vitruvius, Diodorus, Lucretius, Polybius, and, as we now see, Herodotus. They are concerned with the development of culture only in so far as it involves the operation of general forces or modes of existence which stand in fixed relation to one another. As a result, once their categories are accepted, they possess a logical coherence and causal connection which the texts of our tradition lack. Given the hierarchical ordering of the faculties of the soul in which Aristotle believed, the *chrêmatistikos bios* represented by the first stage in his scheme of history (see above, p. 52), the *praktikos bios* of the third stage, and the theoretical pursuits of the final two stages follow one another with an inevitability and an appropriateness which is not to be found in the course of events envisioned by Diodorus, Vitruvius, and Polybius.[44] Given that weaving, farming, building, and shoemaking are the

[43] Solmsen (above, note 42) 53, note 1.

[44] Aristotelian physics provides an interesting parallel. It has been pointed out by B. Snell, *The Discovery of the Mind* (Eng. transl. Cambridge [Mass.] 1953) 243, that, for Aristotle, motion is simply the "actualization of a possibility"—with the result that his theory "does not really penetrate to the dynamic process, the actual course of motion." In similar fashion, history becomes the actualization of the potentiality of the human mind, and the flow of actual events from which it is composed is forgotten. When the history of a specific place rather than general reconstruction was

basic and fundamental categories in any division of labor, the same may be said of Plato's reconstruction of the origins of society in *Republic* II. And in this respect Epicurean theory, linking the development of society to constant aspects of the natural environment or to fixed stages in the life of the cosmos, is much closer to Aristotle and Plato than to Democritus (see below, pp. 170–73). If the elimination of *nomos* as an operative force in human history separates almost all Hellenistic theories of community from Polybius, the refusal to indulge in reconstructions of the past on the basis of *eikos* is equally characteristic of almost all specimens of *Kulturgeschichte* dating from the fourth century and after, and points even more clearly to a fifth century origin for our tradition.

There was only one theory which could redeem the appeal to probability from the charge of lack of sophistication implied by the subsequent abandonment of the method; and that was the theory of Leucippus and Democritus. For a consistently applied atomistic view of society and history, by envisioning an almost infinite number of opportunities for the likely course of events to occur, does allow one to maintain with justification that τὰ ἐοικότα were in fact τὰ γενόμενα.[45] The atomic theory was perhaps the furthest point reached by the late fifth century in its effort to achieve a true picture of the world through the principle of *eikos*. As such it doubtless represented a stage of refinement never appreciated by most practitioners of the method, much less by the men of subsequent ages, who were schooled to accept as true only what could be phrased in terms of universal laws linking natural constants in unvarying relationships. Here idealist and non-idealist alike were the heirs of Plato. To them Democritus' view of the social and cultural process must have seemed rather like a set of interlocking *mythoi*—a construct which, even more than his physics, embodied a view of reality he "desired but could not prove."[46]

The virtual disappearance of the body of doctrine whose existence we have posited was thus natural, perhaps even inevitable. More than its general eclipse, the isolated survival of our theory in a few texts of widely varying character is what now requires some effort at explanation.

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the task at hand, the role played by chance and the single incident could hardly be denied. It was, however, carefully circumscribed—see J. Day and M. Chambers, *Aristotle's History of Athenian Democracy* = *University of California Publications in History*, 73 (1962) 42–65 (especially 64: "In his political thinking change and activity are examined first of all as possible 'natural' developments. The preferred efficient cause is nature . . ."; and 65: ". . . on Aristotle's assumption only those acts are truly explicable that have as their goal the *telos*").

[45] καί φασι μόνοις τοῖς ἄπειρα ποιοῦσι τὰ στοιχεῖα πάντα συμβαίνειν κατὰ λόγον (Simpl. *Phys.* 28.15 = *VS* 68A38). Cf. above, p. 119.

[46] For this judgment of the greatest of later atomists on the work of his predecessor, see Cicero, *Ac.* 2.121: "Lampsacenus Strato . . . qui . . . docet omnia effecta esse natura, nec ut ille, qui asperis et levibus et hamatis uncinatisque corporibus concreta haec esse dicat interiecto inani: somnia haec censet esse Democriti non docentis sed optantis" (= Fr. 32 Wehrli).

CHAPTER TEN

THE HEIRS OF DEMOCRITUS

Given the fundamental differences which separate the Democritean view of culture from later ones, its survival is most natural and most expected where the context is consciously frivolous, as in certain of the euhemerizing texts referred to in Chapter Three; or where the subject under discussion—technology, for example—is "minor" enough to justify assigning a large role in its development to chance and likelihood.[1] The latter consideration explains why Posidonius and the Academy of the mid-fourth century use Democritean material towards the analysis of a process whose subordinate position in the scheme of human development is made perfectly clear (see above, pp. 52–54, 104–5). And it also explains why Vitruvius uses Democritus in a passage whose focus is almost exclusively technological and which, when it digresses to treat of the role of architecture in a larger cultural context, makes claims which its more sophisticated readers must have found extravagant.

More problematical, and more interesting, are the other texts drawn upon for the reconstructions of Chapters One through Eight, texts in which a wider range of cultural phenomena are viewed from a Democritean perspective. In such instances it is natural to assume that the author has some special affinity for Democritean thought, or else is closely dependent on a tradition in which such affinity did exist. The exact character of the relationship is often hard to determine; even more so the channels through which a given writer has become familiar with Democritus. But any clarification we can bring to this subject is worth the effort. It can shed an interesting light on some of the peripheral figures in the history of Hellenistic thought as well as on some peripheral elements in the work of the major ones—even when the lines of Democritean influence which it establishes are highly tentative and uncertain.

1. The State of Nature (Plato, Dicaearchus, Tzetzes, and the Cynics)

The purpose of the *Kulturgeschichte* found in Tzetzes has already been indicated (above, p. 10). It is an effort to make Hesiod's myth of the

[1] Technology might well have its origin in a forest fire; but Herodotus' suggestion (see above, pp. 143–44) that anything so important as an ethnic alliance could have originated in the outhouse was both unbelievable and undignified.

Golden Age more plausible by showing it to be compatible with an evolutionary view of culture. The aim and the method chosen are already present, if not explicit, in the third book of Plato's *Laws*, the earliest of surviving attempts to idealize the "technological" and "political" state of nature. With Plato the attempt is as yet somewhat half-hearted and uncertain: he finds all technology based on the use of metals and all the more complicated forms of social and political life unnecessary or prejudicial to man's happiness; but he cannot bring himself to jettison the fruits of civilization entirely. Weaving, pottery, domesticated animals, housing, religion, and a patriarchal social order are evidently deemed essential to well-being (see above, Chapter Seven, note 5) and their existence accounted for either as an inevitable outgrowth of man's nature or as a survival from a preceding world cycle.

Dicaearchus, in whose account of primitive man (see above, pp. 54–55) the relationship to Hesiod becomes for the first time explicit (cf. Fr. 49, p. 24.3–11 Wehrli), seems to have gone somewhat further than Plato. Like Plato, he assumes that lack of possessions would mean the absence of greed and competition (p. 24.20–22); but whereas Plato had made the state of nature a pastoral one, Dicaearchus describes the earliest men as food-gatherers (this being the real meaning of Hesiod's statement [*Works and Days* 117–18] that the earth of its own accord supplied the Golden Race with all its wants), and for the abundance of *trophê* mentioned in the *Laws* (see above, p. 98) he substitutes a scarcity—a scarcity which, since it preserved mankind from the ill effects of gluttony, was a blessing in disguise (p. 24.15–20). How much further Dicaearchus went with his primitivism we do not know. Weaving and pottery were doubtless not part of the earliest human *bios* as envisioned by him; but the patriarchal family was (Fr. 52 Wehrli).

Details in Plato's account suggest that he is conducting a polemic against Democritus (see above, p. 103). If, as we have suggested, Democritus' theory of the origin of culture was the most elaborate and subtle of those developed in the late fifth century, this very pre-eminence may have been what led Plato to make use of it. In rehabilitating Hesiod against Ionian rationalism the latter was best confronted in the person of its strongest representative. And if there are Democritean elements in Dicaearchus (other than those for which the immediate source is Plato) their presence should doubtless be accounted for in the same way.

Tzetzes' relationship to Democritus is rather different and, in a sense, more intimate. Though separated from him by more than a millenium and a half, he seems to have used for his commentary the writings of a school whose association with Democritus was much earlier and closer. In contending that the simple life breeds peace and harmony, that living always at the

level of bare subsistence saves man from the tyranny of superfluous desires, Tzetzes recalls Dicaearchus. Equally Dicaearchan is the idea of allegorizing Hesiod to construct a "scientific" picture of primitive life.[2] But Tzetzes' exposition of "hard" primitivism (see above, Chapter One, note 16) is far more thoroughgoing, even, than Dicaearchus', and suggests the influence of the school which went furthest in its rejection of the amenities of civilization, the Cynics.[3]

This general consideration can be supplemented by a number of parallels of detail between the *kynikos bios* and that which Tzetzes attributes to early man. The condemnation of fire and its bringer, which is central to Tzetzes' interpretation of the Prometheus myth, is a Cynic motif (Dio of Prusa 6.25, 29–30; Plutarch, *Aq. an ign.* 2.956B),[4] as are his remarks on the effeminacy of culture[5] and his admiration for the laborious life led by early man[6] (this last combined on occasion with a more hedonistic, but equally Cynic,[7] interpretation of the state of nature). There are Cynic parallels to what Tzetzes has to say about the *euêtheia* of primitive man and his resulting lack

[2] Compare Dicaearchus' announced intention, *τὸ λίαν μυθικὸν ἀφέντας εἰς τὸ τοῦ λόγου φυσικὸν ἀνάγειν* (p. 24.10–11 Wehrli), with Tzetzes (67.14–15 Gaisford): *ταῦτα μὲν* [Hesiod's Prometheus story] *τὰ μυθικά· καὶ δή . . . κατ' ἀλληγορίαν μοι μάνθανε.*

[3] Norden, who first called attention to this piece of *Kulturgeschichte* (*NJbb* Suppl. 19.412–22), assumed an Epicurean source. The view is rightly criticized by Reitzenstein, *Orient und Antike* 2.71–74; Seeliger, "Weltalter," 409; and Haussleiter, *Der Vegetarismus in der Antike* 75, all of whom regard Tzetzes as a Cynic text. (Cf. in particular the contrast between the emphasis on *philallêlia* in *VS* II 137.41–42 and Lucretius 5.958–59: *nec commune bonum poterant spectare neque ullis | moribus inter se scibant nec legibus uti.*)

[4] In Plutarch's essay condemnation of fire is linked to an encomium of water, which is nature's necessary gift to man and one which the race has enjoyed from the very beginning of its existence. Tzetzes may, therefore, be reproducing a Cynic motif when he speaks (114.16–18 Gaisford) of early man as enjoying a *philosophos bios*, *ἀρκούμενοι τοῖς . . . λαχάνοις καὶ ἀκροδρύοις καὶ ὕδασι.* Enjoyment of rivers, streams, and springs appears as part of the *kynikos bios* in Maximus of Tyre 36.1F; compare also 23.5BC and Dio of Prusa 12.30.

[5] Compare 68.24–69.3 (= *VS* II 138.8–12), on the change of man's *diagôgê* brought about by the discovery of fire and the resulting arts (which are *τὰ ἡδέα . . . δίκην γυναικὸς ἡμᾶς . . . τρυφερωτέρους ἀπεργαζόμενα*), with Dio 60.8 (Deianeira changed the *diaita* of Heracles, making him sleep on beds and eat artificially prepared food, with the result that his life became one of *malakia* and *tryphê*). Cf. also D. L. 6.59 (going from Sparta to Athens is equivalent to going *ἐκ τῆς ἀνδρωνίτιδος . . . εἰς τὴν γυναικωνῖτιν*).

[6] Compare 101.6–7 (*τληπαθῶς καὶ ἐπιπόνως ἔζων*) with Stobaeus, *Flor.* 29.92 (=W-H III 655.12–17) and D. L. 6.27 (Diogenes' praise of Sparta). Cf. also the laborious life led by the Cynic hero Heracles, contrasted with the "Sophistic" hero Prometheus in Dio 8.33 and, evidently, as early as the time of Antisthenes, perhaps in conjunction with an attack on the technology for which the latter was responsible—see F. Buecheler, "Themistios *Περὶ ἀρετῆς*," *RhM* 27 (1872) 450, note 1; F. Dümmler, *Akademika* (Giessen 1889) 190–92; Weber, *Leipziger Studien* 10.236–57; and K. von Fritz, "Quellenuntersuchungen zu Leben und Philosophie des Diogenes von Sinope," *Philologus* Suppl. 18.2 (1926) 78.

[7] For the fluctuation, see K. Praechter, "Zur Frage nach der Composition des sechsten Rede des Dio Chrysostomos," *Hermes* 37 (1902) 283–86; von Fritz (above, note 6) 43–45; F. Sayre, *Diogenes of Sinope* (Baltimore 1958) 106.

of fear,[8] about the early bountifulness of the earth and the ease with which man provided himself with the necessities of life,[9] and about the habituation which enabled him to bear extremes of heat and cold.[10] Even the social aspects of Tzetzes' account of the state of nature have Cynic overtones;[11] and, like him, the Cynics seem to have interpreted and allegorized the traditional reign of Cronus as a primitive utopia.[12]

[8] 117.1–5. Cf. Maximus of Tyre 36.2FG and Dio 6.34 (civilized man's futile fears of illness and his ineffectual attempts to avoid it), as well as Theophrastus' account (D. L. 6.22) of Diogenes' conversion, which came from his observation of the behavior of a mouse *διατρέχοντα . . . καὶ μήτε κοίτην ἐπιζητοῦντα μήτε σκότος εὐλαβούμενον* (cf. Lucretius 5.973–76) *ἢ ποθοῦντά τι τῶν δοκούντων ἀπολαυστῶν.*

[9] 68.16–19, 70.9–10, 71.19, 72.17–18, 118.21–22 (food-gathering was the only art possessed by primitive man, but this was sufficient for his needs; it was possible in one day to collect food sufficient for a whole year; once this was done, men had no further worries). Cf. D. L. 6.44 and, for a similar idea applied to housing, Seneca, *Ep.* 90.17: *non quilibet virgeam cratem texuerunt manu . . . et hiemem transiere securi?* (from the Stoic-Cynic critique of Posidonius). Seneca also speaks (90.40) of *terra inlaborata et in usus populorum non diripientium larga* (cf. Tzetzes 118.6–8: [*καρπὸν*] *πολύν τε καὶ μὴ φθόνῳ ἁρπαζόμενον τοῖς τότε ἀλλὰ φιλαλλήλως σιτούμενον*). Absent from Seneca's presentation is any mention of an initial stage in which the lack of knowledge of how to gather fruit resulted in frequent death (see above, p. 27, Stage 1D). Conceivably Tzetzes is here borrowing from Diodorus (see above, Chap. I, note 16); but it is equally possible that he has been influenced by a Cynic tradition uncontaminated by any Stoic idea of Providence. The idea that longevity is not necessarily a blessing is not foreign to Greek idealization of *Naturvölker* (cf. Diodorus 3.17.5); and it is only when most rhetorical that surviving Cynic texts suggest that an absolutely unmodified state of nature was completely supportable for man. Habituation is necessary (see following note); Diogenes used *skepê*—though *spaniôs* (Dio 6.10), migrating like the animals to avoid extremes of heat and cold (Dio 6.32–33); and, like Tzetzes' primitive man, he made it his practice *τοῦ μὲν ψύχους εἰς τὰ πεδία καὶ τὰ κοῖλα καταβαίνειν.*

[10] Compare 116.16–17 (though living an existence full of *algeina*, men were so accustomed to it that they did not feel it as such) with Dio 6.15, 60.7, and D. L. 6.23 (on the *synêtheia* which enabled Diogenes to withstand the extremes of heat and cold), and the general remarks on *askêsis* found in D. L. 6.71. Tzetzes' references to the *kausôn* endured by primitive man (116.15) has, it should be observed, no parallel in Diodorus 1.8. It thus provides a further argument against assuming (with Spoerri: see above, Chap. I, note 16) that his account is a simple conflation of material drawn from Diodorus with a description of primitive life as a comfortable Golden Age.

[11] With *ἀγελαῖον διέζων τὸν βίον . . . κοινῶς . . . τοῖς λαχάνοις τρεφόμενοι* (68.6–8) and the references to *syndiagôgê*, *symbiôsis*, and *syndiaitêsis* in 116.10 and 116.29–117.1, compare D. L. 6.72 (women and children should be held in common) and *SVF* 1.262 on the *βίος . . . ὥσπερ ἀγέλης συννόμου νόμῳ συντρεφομένης* of Zeno's *politeia*. On the Cynic affinities of the latter work see D. L. 7.4; D. R. Dudley, *A History of Cynicism* (London 1937) 98–99; N. Festa, "La repubblica di Zenone," *Atti dell' Accademia degli Arcadi* 11 (1927) 116–20; and H. C. Baldry, "Zeno's Ideal State," *JHS* 79 (1959) 9–10.

[12] The phrase *ὁ ἐπὶ Κρόνου βίος* is used by Lucian (*Drapetai* 17) as a designation for the ideal life of the Cynic (cf. Diogenes, *Ep.* 32: *ἐλευθερία ἡ ἐπὶ Κρόνου*); and the particular perspective of Tzetzes, along with some of his phrascology, is to be found in a Cynic passage of Maximus of Tyre (36.1H), which speaks of the poets as allegorizing (*ainittomenoi*) in their story of the reign of Cronus a life which is *ἀπόλεμον, ἀφύλακτον, ἀσίδηρον, εἰρηνικόν, ἀπεριμάχητον, ἀνενδεᾶ*. Cf. Tzetzes 68.20–25: *βίον ἁπλοῦν καὶ ἀπέριττον καὶ φιλάλληλον . . . δίχα πυρὸς ἐπιγνώσεως, οὐ βασιλεῖς, οὐκ ἄρχοντας, οὐ δεσπότας κεκτημένοι, οὐ στρατείας, οὐ βίας, οὐχ ἁρπαγάς, ἀλλὰ φιλαλληλίαν μόνον . . .*; and his later reference to this as a *φιλόσοφον βίον* (114.16).

We do not know at what period the Cynic tradition represented in Tzetzes took shape, hence cannot say whether it has influenced Plato and Dicaearchus or vice versa. It has been maintained that the primitivism which was to become characteristically Cynic was first formulated by Antisthenes;[13] on the other hand, none of the Cynic traditions which can be cited for their parallels to Tzetzes are certainly pre-Hellenistic.[14] But whatever their chronological relationship, the Cynic view of the state of nature and that held by Plato and Dicaearchus represent modifications of an originally Democritean doctrine; and their basic tendencies can be distinguished and defined with little difficulty. Plato and, to a lesser degree, Dicaearchus are sharply opposed to Democritus and borrow from him only in order to make clear the rather narrow limits within which they consider his theories to be valid. The Cynics and Democritus are allies to a point, and this is doubtless what explains their use of his doctrines. Like him, they are anti-teleological; like him, they are willing to regard all, or nearly all, the usages which prevail in the political and social realms of man's existence as the work of *thesis* rather than *physis*; like him, they are anxious to establish the fact that man once lived a life which was indistinguishable from that of the animals.[15] For all these reasons, the *Kulturgeschichte* of Democritus was a useful weapon in the promulgation of their views, and they were willing to take it over in its entirety—with two major exceptions: the evaluation placed on the whole process had to be exactly reversed, and *philallêlia* replaced *allêlophagia* as a description of primitive man's relationship with his neighbors.

Attention has recently been drawn to the role which the "Cynic Democritus" may have played in the transmission of the ethnical fragments which appear in the collection of Stobaeus.[16] We are perhaps justified in assigning to the same figure a significant place in the later history of Democritean *Kulturgeschichte.*

[13] See above, note 6.

[14] Crates' reference (Frs. 4 and 6, pp. 218–19 Diels) to the freedom from greed and warfare which the inhabitants of Pera owe to their poverty is the earliest certain example from a Cynic source of the attitude which appears in Plato, Dicaearchus, and Tzetzes.

[15] For the similarity of the Cynic and Democritean views of the state of nature, compare, in particular, the two following passages:

Dio 6.28: *μήτε πυρὸς ὄντος μήτε ἐσθῆτος μήτε οἰκιῶν μήτε ἄλλης τροφῆς ἢ τῆς αὐτομάτου. . . .*

Diodorus 1.8.5: *γυμνοὺς μὲν ἐσθῆτος ὄντας οἰκήσεως δὲ καὶ πυρὸς ἀήθεις, τροφῆς δ' ἡμέρου παντελῶς ἀνεννοήτους. . . .*

[16] See Stewart, *HSCP* 63.179–88. The evidence assembled in this article inclines me to the view that Tzetzes' Cynic source knew Democritus directly rather than (as the parallels between Lucretius and Tzetzes—see below, note 71—might otherwise suggest) through an Epicurean *Mittelquelle.*

2. Culture and the Gods (Euhemerism and Related Theories)

One of the works most extensively utilized in the reconstructions of Chapters One through Eight was the *theologoumena* of Diodorus I. The Democritean echoes found in this text are not entirely isolated; comparable ones appear, though far more sparsely, in a number of accounts of a euhemerist character (see above, pp. 48–49), nor is the *theologoumena* taken as a whole an isolated document. The entire contents of Diodorus 1.13–29 have close parallels both in the *Sacred Chronicle* of Euhemerus himself and in another euhemerizing work, the account of the origin of the gods attributed to the Egyptian priest Leo (cf. above, pp. 38–39). Something must be said about the relationship of these three texts before any attempt is made to account for the presence of Democritean material in the tradition which they represent.

The points of similarity may be summarized as follows[17] (I = Book One of Lactantius' *Inst. div.*; 1, 5, 6 = Books 1, 5, and 6 of Diodorus):

A. Euhemerus	B. Diodorus	C. Leo
Uranus is the first king	Helios is the first king (or, according to others, Hephaestus)	Vulcan is the first king,
on account of his being *euergetikos* and *epieikês* (6.1.6 = *FGrH* 63F2, p. 303.13–14).	on account of the benefit conferred on the race by his discovery of fire (1.13.2–3).	
He is succeeded by Cronus and Rhea (6.1.7 = F2, p. 303.17–18),	Cronus and Rhea follow (1.13.4),	followed by Saturn,
then by Zeus and Hera (6.1.8 = F2, p. 303.19; I.14.10–12 = F16),	then Zeus and Hera (1.13.4),	who is the first of the race of Jove (*FGrH* 659F5).
who rule the world (I.11.34 = F19).	who establish a world kingdom (1.13.4).	
	They are succeeded by Isis and Osiris (1.13.4).	Isis, who rules with her brother Osiris,
Zeus introduces the use of grain (I.11.45 = F24),	Isis discovers grain	discovers grain
ends cannibalism (I.13.2 = F22),	and so puts an end to cannibalism (1.14.1);	
and rules by law (I.11.35 = F20).	she establishes laws and legal punishments (1.14.3–4).	
Zeus deifies his grandfather Uranus (I.11.63 = F21)	Osiris builds a temple to his father Zeus (1.15.3)	while sacrificing to her parents (F6).

[17] The table is based on Jacoby, *RE* 11.969 (for Diodorus and Euhemerus), and E. Schwartz, *De Dionysio Scytobrachione* (Diss. Bonn 1880) 50–51 (for Diodorus and Leo).

and encourages the development of useful inventions (I.11.35=F20),[18]	and establishes rewards for inventors (1.15.4–5).	Liber encourages inventors (F9).[19]
aided by Hermes (F7),[20] who records the deeds of Zeus on the sacred *stêlê* in Panchaea (5.46.8=F3, p. 308.21–23)	Hermes, the divine scribe, is Osiris' advisor and is responsible for a number of inventions (1.15.9–16.2).	Mercury is Liber's counselor (F6) and discovers the art of weaving (F9).
Zeus carries the blessings of civilization through the whole world (I.11.45=F24)	Osiris carries the blessings of civilization through the whole world (1.17 ff.)[21]	
and receives universal honors (I.22.21–27=F23).	and receives universal honors (1.20.5).	
Zeus is buried in Panchaea, his grave accessible only to priests (5.44.4=F3, p. 306.14–17).	Osiris is buried in Philae, an island accessible only to priests (1.22.3–6).	
Artemis and Apollo are the last rulers mentioned on the sacred *stêlê* in Panchaea (5.46.8=F3, p. 308.19–22).	Horus, the son of Isis and Osiris, is the last of the divine rulers (1.25.7).	

The close connection between A, B, and C should be obvious;[22] and almost as obvious is the fact that the "Egyptian" version of B and C must have served as a model for the Greek version of A. Greek tradition does not credit Zeus with the invention of laws and the ending of cannibalism. It is rather Demeter who, as bringer of grain and *thesmophoros*, is properly assigned these

[18] Less certain is the parallel between 1.15.5 (the discovery of metals in the Thebaid—see above, p. 37, Stage 5B) and Pliny, *NH* 7.197: *auri metalla et flaturam invenit Cadmus . . . ut alii Thoas aut Aeacus in Panchaea* (=*FGrH* 63F28). It is said of Panchaea in Diodorus' excerpts from Euhemerus that ἔχει ἡ χώρα μέταλλα δαψιλῆ χρυσοῦ καὶ . . . σιδήρου (5.46.4=*FGrH* 63F3, p. 308.8–9). Hence Jacoby may be right in suggesting (*RE* 11.954) that Pliny's heurematistic source has drawn on Euhemerus for its list of *inventa*. If this is so, Aeacus was doubtless a man attracted, like Leo's Ammon (F9) and the unnamed inventors of Diodorus 1.15.5, by the rewards offered for new contributions to the welfare of society.

[19] The similarities between this episode in Leo and parallel accounts in Diodorus and Lucretius are discussed above, p. 39.

[20] *Euhemerus . . . Venerem ait primam sidera constituisse et Mercurio demonstrasse* (Hyginus, *Poet. astr.* 2.42=*FGrH* 63F7). Cf., in Leo's account, F6: *Isis invenit hordei segetem atque inde spicam marito regi et eius consiliario Mercurio demonstravit.*

[21] Schwartz (*RE* 9.671) considers the passages (15.6–8; 17–20.5) which speak of Osiris' expedition to be a fragment of a later Dionysus romance inserted by Diodorus into the main body of his account, which derives from a different source. He cites by way of proof the contrast between the Busiris described in 17.3 and the one who appears in 45.4, and notes the parallels between these passages and Diodorus' subsequent accounts (3.63 ff., 4.2 ff.) of the world expedition of Dionysus. But the parallel with Euhemerus indicates that the idea, at least, of the world expedition is likely to have come from the same source as the surrounding material, though Diodorus may have embellished it with borrowings from elsewhere.

[22] It is most unlikely that accounts A, B, and C are simply treatments of the same subject matter from a similar point of view (so J. Kaerst, *Geschichte des Hellenismus* 2[2] [Berlin 1926] 184; and van der Meer, *Euhemerus van Messene* 132–33). The parallels are too numerous and too exact.

achievements;[23] and it is only the identification of Demeter with Isis and the latter's association with Osiris in the dynasty of Egyptian god-kings which have suggested the transfer of Demeter's *heurêmata* to the figure who stood at a corresponding point in the Hesiodic succession of divine monarchs. A similar identification of Dionysus with Osiris has led to the crediting of Zeus with the former's world expedition;[24] the Apollo-Horus equation accounts for the statement, unattested in Greek mythology, that Apollo was the last of the divine rulers of the world (cf. Herodotus 2.144; Manetho, *FGrH* 609F3a); and Hermes owes to his Egyptian counterpart, Thoth (cf. Plato, *Phaedrus* 274C), the role he plays as royal advisor, inventor, and scribe.[25]

On the other hand, Euhemerus has done more than simply transfer an Egyptian theology to Greece: the most important differences between our three accounts are in content and tone rather than in setting. Diodorus makes a clear distinction in his theology between two classes of gods: the *ouranioi* (sun, moon, and elements, which were held to be divine by the first men who looked up with astonishment at the spectacle of the heavens—1.11.1) and the *epigeioi* (mortals who receive divine honors because of their services to the race—1.13.1). There is nothing here which cannot be paralleled in pre-Hellenistic Greek conceptions of deity. Herodotus cites with approval (2.44.5) the practice of those Greeks who pay honors to both a mortal and a divine Heracles (compare Osiris' two temples, one to the heavenly and one to the earthly Zeus, in Diodorus 1.15.3); and were it not for the fact that

[23] For the connection between the discovery of grain and the end of cannibalism, cf. the passages from Plato discussed above (p. 104, with note 14).

[24] The travels of Dionysus were known to the fifth century (Euripides, *Bacchae* 13–22) but they assumed much greater importance once seen as the prototype of Alexander's expedition. The identification, suggested perhaps by the discovery of a Nysa in India (Arrian 5.1–2; see A. D. Nock, "Notes on Ruler Cult, I–IV," *JHS* 48 [1928] 24–27), was probably current in Alexander's lifetime—perhaps in the works of the poets who glorified his exploits (W. W. Tarn, *Alexander the Great* 2 [Cambridge 1948] 55–62) or perhaps in the prose account of Chares of Mytilene (L. Pearson, *The Lost Histories of Alexander* [New York 1960] 58). Dionysus would thus have been the traveler god *par excellence* for anyone writing in the age of the *diadochoi*.

[25] Thraede, calling attention to the parallels which link Euhemerus not only to the *theologoumena* of 1.13–29 but also to other *archaeologiai* in the early books of Diodorus, argues that the Egyptian motifs in Diodorus' report of the *Sacred Chronicle* are the result of a "zunehmende Orientalizierung des Euhemerismus" for which not Euhemerus but his followers, Diodorus included, are responsible (*RAC* 6.879–82; cf. Spoerri, 194). 1.13–29 becomes, in this view, Diodorus' own transfer of the *Sacred Chronicle* to an Egyptian setting. It is, of course, likely enough that Diodorus' report expands and modifies Euhemerus at points (see below, Appendix Four, notes 2 and 6); but two considerations seem to me to tell decisively against the theory of extensive revisions advanced by Thraede: (1) Three of the four Egyptian motifs in Euhemerus—the role of Hermes, Zeus's world expedition, and his introduction of grain—are verified for Euhemerus by the independent testimony of Lactantius and Hyginus (cf., for the latter, above, note 20). (2) Leo's theology, which was known to Varro (see Pfister, *Festschrift Klauser* 293–94), probably antedates Diodorus, yet seems to have drawn on the account preserved in 1.13–29 (see below, pp. 158–59). The latter is thus unlikely to be original with Diodorus.

there is no plausible account of their birth and early history, he would be ready to believe that the Pan and Dionysus whom the Greeks worship were mortals bearing the names of two Egyptian gods who flourished at a much earlier date (2.146). Sun and moon appear among those helpers and sustainers of human life which, according to Prodicus, formed the first objects of man's worship;[26] and Plato makes them, along with the earth, stars, and heavens, the principal deities both of the barbarians and the earliest Greeks (*Cratylus* 397CD). Prodicus may even have recognized alongside this class of gods another, of later origin, consisting of persons worshipped on account of their acts of *euergesia* to the race.[27] Even if the two categories were never discussed side by side in a single work in Classical times, the classification was implicit in Greek thought.[28] In transferring the idea of deified mortals to early Egyptian history, the tradition followed by Diodorus was doubtless misinterpreting native conceptions about the divine dynasties which preceded Menes; but no fourth century reader—if the tradition is that old—would have found in it an implied reinterpretation of Greek thought.

Euhemerus, on the other hand, does offer such a reinterpretation. It is possible that he denied the existence of *ouranioi theoi* altogether;[29] if they had

[26] *VS* 84B5. If we are to believe the late testimony of Epiphanius, Prodicus' list of original gods almost exactly paralleled that recognized by the Egyptians in 1.11: *Πρόδικος τὰ τέσσαρα στοιχεῖα θεοὺς καλεῖ εἶτα ἥλιον καὶ σελήνην* (*De fide* 9.25, p. 507 Holl).

[27] Prodicus' views are here preserved at third hand. Philodemus (*De piet.* 9.7, p. 75 Gomperz) tells us that the Stoic Perseus found "not unpersuasive" *τὰ περὶ τοῦ τά τρέφοντα καὶ ὠφελοῦντα θεοὺς νενομίσθαι καὶ τετειμῆσθαι πρῶτον ὑπὸ Προδίκου γεγραμμένα, μετὰ δὲ ταῦτα τοὺς εὑρόντας ἢ τροφὰς ἢ ἀκέπας ἢ τὰς ἄλλας τέχνας*. As W. Nestle points out ("Bemerkungen zu Vorsokratikern und Sophisten," *Philologus* 67 [1908] 556–58) the grammar of the sentence requires that *μετὰ δὲ ταῦτα* be taken as introducing a second part of Prodicus' theories rather than, as has sometimes been supposed, Perseus' own addition to them. For the contradiction between this and other reports of Prodicus' views see Pease's note to Cicero, *ND* 1.38, and M. Untersteiner, *The Sophists* (Eng. trans. Oxford 1954) 210–11 with notes 9, 22, and 27, who accepts Philodemus' testimony.

[28] For *hêrôikai* and *isotheoi timai* offered in Classical times to oikists, warriors, kings, lawgivers, etc., see the extensive list in L. Cerfaux and J. Tondriau, *Le culte des souverains* (Tournai 1957) 459–66 and 468–69. As F. Pfister points out (*Der Reliquienkult im Altertum* 1 [Giessen 1909] 382) everything which is attributed in Hellenistic times to *epigeioi theoi*—wanderings, inventions, founding of cities and cults, tombs—can be paralleled in earlier *Heroensagen*.

[29] Most scholars assume that Euhemerus recognized the same division between *ouranioi* and *epigeioi* as appears in Diodorus 1.11 (cf., for example, Jacoby, *RE* 11.964; van der Meer, *Euhemerus van Messene* 54–56; Kaerst, *Geschichte des Hellenismus* 2^2.193–94; Tarn, *Alexander the Great* 2.431). But the evidence is not conclusive. (Cf., for what follows, R. Hirzel, *Der Dialog* 1 [Leipzig 1895] 397, note 1; Langer, *ΑΓΓΕΛΟΣ* 2.53–59; Spoerri, 191–92; Thraede, *RAC* 6.880). Eusebius, in the passage (*PE* 2.2.59B–61A) in which he reproduces the excerpts from Euhemerus which appeared in Diodorus VI, speaks of *ouranioi* and *epigeioi theoi* (*FGrH* 63F2, p. 302.20–26); he does not, however, say that Euhemerus himself recognized or dealt with the difference. One of Eusebius' excerpts from Diodorus (6.1.8 = *FGrH* 63F2, p. 303.15–16) does, it is true, say that Uranus was so named because he was the first to worship the *ouranioi theoi*; but this testimony is suspect, inasmuch as it conflicts at two points with Ennius' version of the *Sacred Chronicle* (cf. *Inst. div.* 1.22.7 = *FGrH* 63F23, p. 312.11–12, where the institution of religion is attributed not to Uranus but to his grandson Jove, and

a role in his theology, it was certainly minimal. There is no trace in the *Sacred Chronicle* of the celestial and earthly pairs of deities mentioned by Diodorus;[30] the head of the Greek pantheon, who has a counterpart among the *ouranioi* in Diodorus, is unmistakably an *epigeios* in Euhemerus. And since the exploits recorded on the *stêlê* in Panchaea are recognizably those attributed to Uranus and his descendants by Hesiod, it is clear that Euhemerus views his protagonists as identical with the gods worshipped by the Greeks —not as a set of mortals bearing their names.

The third of our accounts, that of Leo, deals with Egypt, but it seems to have offered, by implication at any rate, the same more radical interpretation of Greek theology which we find in Euhemerus. Leo was reckoned in later antiquity among famous atheists (*FGrH* 659T1–2), and the work in which his theology appeared was frankly sensational in both form and tone. It purported to be a letter from Alexander to Olympias containing revelations concerning the true nature of the gods—revelations made to him by the priest Leo under compulsion and with the request that the letter be burned

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1.11.63=*FGrH* 63F21, where the heavens are named after Uranus, not vice versa). References to *ouranioi theoi* in the later euhemerizing account of Philo of Byblos (see Kaerst, *Geschichte des Hellenismus* 2^2.193–94, note 6) are hardly significant, given the confused and heterogeneous character of that work. Nor is a very strong argument for Euhemerus' recognition of *ouranioi* provided by the similarities (see O. Weinreich, "Menekrates Zeus und Salmoneus," *Tübinger Beiträge* 18 [1933] 14–15; Tarn, *ProcBritAc* 19.144–45; *Alexander the Great* 2.429–33) between Uranus' world kingdom in the Sacred Chronicle and Alexarchus' Ouranopolis (see above, Chap. IX, note 23). For though we know from Alexarchus' coinage (Weinreich, 13) that sun, moon, and stars were worshipped as part of his city's pantheon, it need not follow (as Nock, for example, assumes, *CR* 76.51, note 3) that they were worshipped in similar fashion in the kingdom of Uranus described by Euhemerus. Use of Alexarchus would not preclude the possibility of innovations and modifications. Aphrodite Ourania was worshipped in Ouranopolis, presumably in the same capacity as the sun, moon, and elements of Diodorus 1.11; and Euhemerus knows of an Aphrodite who may have been called *ourania*. But it is fairly clear that she belongs among the *epigeioi theoi*; cf. F7: *Venerem primam ait sidera constituisse et Mercurio . . . demonstrasse*. The other astral deities of Alexarchus may have undergone a similar metamorphosis. Finally, one should note, against the theory of *ouranioi theoi* in Euhemerus, the criticism in Sextus, *Adv. math.* 9.34—that the notion of mortals deified for *euergesia* does not explain how the idea of the divine arose in the first place. The objection would have had little force had Euhemerus recognized—or stressed—the existence of *ouranioi theoi* to whom *epigeioi* were added at a later date. All things considered, the absence of any certain reference to celestial deities in what survives of Euhemerus inclines me to the belief that he did not include them in his pantheon. For our present purposes, however, it is sufficient to emphasize that they play no significant role in his theology. See, further, note 30 and Appendix IV.

[30] As R. Hirzel points out, "Die Homonymie der griechischen Götter," *BerLeipzig* 48 (1896) 280. Neither is there any clear trace in Euhemerus' account of Panchaea of religious observances paid to gods other than Triphylian Zeus and his descendants. There may well have been a cult of Helios on the island (cf. Diodorus 5.44.3=*FGrH* 63F3, p. 306.14 [on the "water of *hêlios*" found in the precinct of Zeus] and Pliny's mention [*NH* 10.4=*FGrH* 63F29] of a *solis urbs* near Panchaea); but there is no reason to believe (as van der Meer contends, *Euhemerus van Messene* 42–43) that he was an *ouranios* rather than an *epigeios* (cf. Diodorus 1.13.2, where the first of the *epigeioi* to rule Egypt is Helios).

as soon as it was read (F1). If Leo's theology distinguished *ouranioi* from *epigeioi*, the tone and reputation of the letter are a little hard to understand. Moreover, Augustine refers to Leo's account as one in which "non Picus et Faunus et Aeneas et Romulus vel etiam Hercules et Aesculapius et Liber Semela natus et Tyndaridae fratres et si quos alios ex mortalibus pro dis habent, sed ipsi etiam maiorum gentium di . . . Iuppiter, Iuno, Saturnus, Vulcanus, Vesta et alii plurimi (quos Varro conatur ad mundi partes sive elementa transferre) homines fuisse produntur" (*Civ. Dei* 8.5 = *FGrH* 659T2a). The view ascribed here to Varro is the same which appears in Diodorus 1.11; clearly it was not put forth by Leo.

It is equally clear, given this difference in point of view, that Leo's account cannot be, as has on occasion been suggested,[31] the source on whom Diodorus has drawn for his Egyptian theology. The similarities between Diodorus and Leo are most plausibly explained by assuming that the author of Leo's account is, like Euhemerus, indebted to this source.[32] This is the conclusion demanded both by the more "radical" character of Leo's entire theology, and by two peculiarities in his account to which attention has yet to be called. Since Alexander did not go south of Memphis his priestly informant must be from lower Egypt, and one would expect his story of the gods to be localized there. It is not, however (cf. F9a, where we learn that Liber gave to Ammon a plot of land across from Thebes), probably because Leo's story is based on another treatment of the same subject—most likely the one used by Diodorus as well—in which Thebes played the central role. The second peculiarity involves a difference between the accounts of the discovery of grain given by Leo and Diodorus. Diodorus cites the custom of offering first fruits to Isis as a proof of her discovery of grain: the rite is a survival of a practice instituted by Isis' grateful contemporaries (1.14.2). Leo does not mention the custom, saying only that Isis discovered grain *cum parentibus sacrificaret* (F6). Like Diodorus, he mentions a sacrifice which uses grain, but Diodorus' account makes sense in a way his does not. It provides evidence of a sort for the theory being advanced with regard to the origin both of grain and of the divinity of Isis. Leo, on the other hand, seems to be giving a perfectly gratuitous piece of information when he links the discovery to Isis' worship of her parents—as if he were familiar with the account

[31] By Schwartz (above, note 17) 50–52 (positing Dionysius Scytobrachion as a *Mittelquelle*).

[32] Jacoby, following R. Reitzenstein (*Zwei religionsgeschichtliche Fragen* [Strassburg 1901] 22, note 2) and followed by Nock, *JHS* 48.28, note 37, Geffcken, *RE* 24.2012, and M. Nilsson, *Geschichte der griechischen Religion* 2^2 (Munich 1961) 285, would date Leo early: ". . . die Form seines Buches—Brief Alexanders an Olympias—lässt vermuten dass es bestimmt war, den Griechen eben diese Idee des Gottkönigtums nahe zu bringen" (*RE* 11.968). But this form could just as easily be taken as an indication of late origin. Leo is seeking to popularize ideas already current in certain Greek circles by exploring their dramatic and sensational possibilities. Cf. Pfister, *Festschrift Klauser* 296.

reproduced in Diodorus but had misunderstood the connection posited there between the discovery of grain and its use in a certain type of sacrifice.

The chronological relationship that has been established between Euhemerus, Leo, and Diodorus' source[33] allows us to date the last-named work with some certainty to the years around 300 B.C.[34] and to place it at the head of the entire euhemerist tradition. And with these facts established it becomes much easier to understand the relationship in which that tradition stands to Democritean anthropology. Diodorus' source is usually and most plausibly identified as Hecataeus of Abdera;[35] yet even if he was not its

[33] The question of priority between Euhemerus and Leo has not been raised here nor is it relevant to the present discussion: the dependency of both authors on the source followed by Diodorus is all that need be established. One might be inclined—without, however, any compelling justification—to assign the innovation by which the *maiorum gentium di* are declared to be of mortal origin to the more famous of the two figures. A more substantial argument for the late dating of Leo is perhaps provided by the conclusion of F9a, where it is said that, in commemoration of the part he played in the discovery of wool, Ammon or "according so some" Liber is represented in statues with ram's horns. The close association between Ammon and Dionysus which this detail and, indeed, Leo's whole story presupposes is thought by some to be of fairly late origin (see M. Fasciato and J. Leclant, "Une tête 'ammonienne' au Musée de Cherchel," *RA* 30 [1949] 364, and "Types monétaires à cornes de bélier," *MélRome* 61 [1949] 13–17). The first datable author to link the two closely is Callimachus' pupil Hermippus (*ap.* Hyginus *Astr.* 2.20), and the pairing did not become important until the reign of Philopator (221–205 B.C.), the first Ptolemy to style himself *Neos Dionysos* and to have himself portrayed by sculptors as wearing the ram's horns of Ammon (Clement, *Protr.* 4.54.2–3). See, however, against this view, A. B. Cook, *Zeus* I (Cambridge 1914) 371–76, who argues that the association between the two gods is pre-Alexandrian.

[34] A *terminus ante quem* is provided by Euhemerus' *Sacred Chronicle*, suggested dates for which range from sometime in the 290's (Tarn, *ProcBritAc* 19.165–66) to ca. 270 (G. Vallauri, "Euemero di Messene, Testimonianze e frammenti," *PubblTorino* 8.3 [1956] 5); cf. the survey in van der Meer, *Euhemerus van Messene* 9–12. The *terminus post quem* must be the establishment of a Greek dynasty in Egypt, inasmuch as part of what is said in Diodorus 1.11–29 about the early god-kings must be read as Lagid propaganda. This dating applies, of course, only to the portion of Diodorus which is paralleled in Euhemerus and Leo; and though these chapters presuppose the existence of *ouranioi theoi* and must be from a work in which some attention was paid to them, it need not follow that the discussion of them was identical with the one which now appears in 1.11.2–12.10. Spoerri has argued (175–88), at times quite persuasively, for the late Hellenistic character of a number of things in this section; however, we are so much better informed about *Späthellenismus* than about its immediate predecessor that it is dangerous to assume that the ideas to which Spoerri calls attention *could* not have appeared at an earlier date.

[35] The identification goes back to Schwartz (*RhM* 40.223–32; *RE* 9.670–72) and has been recently reaffirmed (against the objections of Spoerri, 164–211) by Vallauri, *PubblTorino* 12, No. 5, 6–17, and Nock, *CR* 12.50–51. Spoerri's central contention, that the parallels between the Egyptian theology of Diodorus and other passages (elsewhere in Book I and in Diogenes Laertius) of known Hecataean origin to which Schwartz called attention are too brief or too uncertain to be of any significance, seems to me quite justified. But the Hecataean origin of the portion of the *theologoumena* with which we are concerned can be fairly well established on grounds not considered by Schwartz or Spoerri. One of these is chronological: between Aristagoras of Miletus (*FGrH* 608), who wrote before Alexander (Schwartz, "Aristagoras," *RE* 3 [1896] 850), and Euhemerus the only writers who are known to have composed Aegyptiaca are Hecataeus and, possibly, Leo and Manetho. Leo cannot, as we have seen, be Diodorus' source; and it is hardly likely that Manetho's work would have presented the earliest Egyptian kings in so thoroughly Hellenic a guise. Spoerri, it is true,

author, or if the tradition which makes him a follower of Democritus rests on nothing more than inference from his place of birth,[36] the character of the work and its date of composition were such as to favor use of Democritean material. Confronted with the task of presenting to his compatriots, probably for the first time, the Egyptian tradition of pre-dynastic god-kings and of making it understandable to them, our author could and did draw on a number of beliefs and practices already current in Greek religion: the notion of certain gods (two of whom, Demeter and Dionysus, had their equivalents in the Egyptian king list) as patrons or inventors of the arts on which civilization rests (cf. Plato, *Politicus* 274CD); the custom of awarding divine or

argues that the dynastic succession of 1.13.2–5 derives partially from Manetho (195, with note 33 and addendum, p. 222). But the argument is not persuasive. The succession given by Diodorus is Helios (or "as some say" Hephaestus), Cronus and Rhea, Osiris and Isis (or "according to most" Zeus and Hera followed by Isis and Osiris), Horus. Manetho has the sequence Hephaestus, Helios, (Sosis?), Cronus-Rhea, Isis-Osiris, Typhon, Horus (*FGrH* 609F3a, 4, 5, 27). While it is possible to regard Diodorus' list as a conflation of Manetho's with another tradition, there is no need to do so. The lists of both authors reflect native tradition: cf. the parallel succession Ptah, Ra, Su, Geb (=Cronus), Osiris, Set (=Typhon), Horus found in the Turin papyrus (E. Meyer, "Ägyptische Chronologie," *AbhBerlin* 1904, 1.115–17). All three lists seem to have something to do with the enumerations of the principal deities which appear on Egyptian monuments. The fluctuation found there between lists headed by Ptah (Lower Egypt) or one of the sun gods Amon-Ra, Mantu, Atum (Upper Egypt)—see R. Lepsius, "Über den ersten Ägyptischen Götterkreis und seine geschichtlich-mythologische Entstehung," *AbhBerlin* 1851, 167–96; G. Maspero, "Sur les Dynasties Divines de l'Ancienne Égypte," *Proc. Soc. Bibl. Arch.* 12 (1890) 419–24; K. H. Sethe, "Beiträge zur ältesten Geschichte Ägyptens," *Untersuchungen zur Geschichte und Altertumskunde Ägyptens* 3 (1905) 9—shows that a conflation of different native traditions may lie behind the presence of both Hephaestus (=Ptah) and Helios (=Ra) at the head of Diodorus' list (cf. Jacoby, *FGrH* IIIa 84.16–85.8); and a comparable conflation of Greek and Egyptian genealogy may account for the uncertainty as to the exact position of Zeus in the succession (Greek feeling would favor his insertion between the Geb-Cronus and Osiris-Dionysus of Egyptian tradition). Either or both pairs of variants could have appeared in almost any Aegyptiaca (so Vulcan figures as the first king in Leo as well as Manetho, and another succession—Nile-Hephaestus-Helios—is found in Cicero, *ND* 3.54–55, Arnobius 4.14, and D. L. 1.1).

Also worth noting in favor of a Hecataean origin for 1.11 ff. are the parallels between these chapters and Theophrastus *ap.* Porphyry *De abst.* 2.5 (=*Περὶ εὐσεβείας*, Fr. 2 Pötscher). The Egyptians, according to Theophrastus, first fed on grass (cf. Diodorus 1.43.1), offering the first fruits of their *trophê* to the *ouranioi theoi* (cf. 1.11.1). The custom of offering meal at sacrifice is a survival of a later stage of dietary development (cf. 1.14.2: the custom of offering first fruits of the harvest to Isis cited as proof of her discovery of grain). The Aegyptiaca of Hecataeus was the most up-to-date source of information on Egypt in Theophrastus' day, and it would have been natural for him to use it. This and other parallels between Theophrastus and the Egyptian *Kulturgeschichte* of Diodorus I (see W. Jaeger, *Diocles von Karystos* [Berlin 1938] 123–32) point to a common source in Hecataeus. Comparable parallels between Diodorus and the Jewish *archaeologia* which we know to have appeared in the Aegyptiaca point to a similar conclusion. Moses' position in Jewish prehistory is essentially that of Osiris in Egyptian: he is a benefactor of the race, the founder of the first city, and the introducer of the first religion (*FGrH* 264F6, p. 14.10–17). Only the end of his career, for obvious reasons, is different from that of his Egyptian counterpart.

[36] The "tradition" itself exists in a single passage (Clement, *Strom.* 2.130.4–6), where Hecataeus' views on the *telos* are given along with those of other Abderites.

semi-divine honors to mortal benefactors; the recent deification of Alexander and his glorification—probably beginning even during his lifetime—as the equal or superior of Dionysus.[37] Yet in no area of Greek thought could he have found so much material to suit his purpose as in Democritean *Kulturgeschichte*. For once the divine craftsman and the deified mortal *euergetês* of Greek tradition had been fused into a single personality,[38] and the type so created identified with the pre-dynastic god-kings, Egyptian tradition was most easily rationalized in a context suggested by Democritus. The distinction observed by the latter between history and pre-history (see above, p. 44) could be equated with that separating the dynastic and pre-dynastic periods of the Egyptian monarchy; because of its emphasis on the individual moment in the cultural process Democritus' reconstruction of pre-history was easily broken down into a series of episodes involving different gods; its notion of the original benefactor-king could be taken over without essential change;[39] and its pervading atmosphere of *mythos* (see above, pp. 145–47)—which would have made it sound old-fashioned if propounded in direct competition with the more "modern" anthropology of Academics and Peripatetics—was eminently suitable in an account presented, as those found in Diodorus' source and subsequent euhemerist texts regularly are, in the guise of native tradition preserved from time immemorial in priestly archives.[40] Nor were the propagandistic ends of our author (see above, note 34) ill served by his Democritean model. Its picture of the progressive expansion of an original social and economic unit was doubtless, once transformed into an account of the triumphal civilizing expedition of an Osiris or Dionysus, most welcome at the court of a prince who laid claim to be the heir to the universalism of Alexander and would have regarded these gods as his prototypes.[41]

[37] See above, note 24, and the tradition regarding Anaxarchus preserved in D. L. 9.60 = *VS* 72A1, and Arrian, *Anab.* 4.10.5 = *VS* 72A6.

[38] This fusion may, of course, have already been effected by Prodicus—see above, note 27.

[39] Here, however, Democritus need not have been the only or even the most immediate model. Cf. Aristotle, *Pol.* 3.1285b6–9, which makes the first rulers benefactors of society and includes in their number discoverers of technology; and, even more strikingly, Lycurgus, *Leocr.* 88, on the *isotheoi timai* paid to early kings of Athens because of their services to the city.

[40] It is possible, of course, that the new mode of presentation was partially suggested by references to oriental tradition in Democritus' own writings. Cf. the two doubtfully authentic titles *Περὶ τῶν ἐν Βαβυλῶνι ἱερῶν γραμμάτων* (B298b) and *Περὶ τῶν ἐν Μερόῃ ⟨ἱερῶν γραμμάτων⟩* (B299a); and, for the possibility that *Kulturgeschichte*—in the form of a Democritean theory of the origin of writing—was part of the contents of these works, see R. Eisler, "Zu Demokrits Wanderjahren," *AGP* 31 (1918) 204–11.

[41] This application of the *Kulturgeschichte* of Democritus may have already been present in the work of his follower Anaxarchus, a contemporary and friend of Alexander and author of a *Peri basileias* (*VS* 72B1–2). For his glorification of Alexander as the equal of Dionysus see the references given above, note 37; and for the general similarity of outlook uniting him and Euhemerus, Kaerst, *Geschichte des Hellenismus* 2^2.191.

Yet the modifications which transformed Democritean anthropology into Egyptian theology were, if easy to make, of far-reaching consequence. They involved nothing less than a fundamental change in the historian's entire metaphor. The workings of the cultural process as Democritus views them are analogous to those of a democratic assembly: individual suggestions are brought forward, then taken up, modified, and amended by other speakers and finally accepted or rejected by the whole *plêthos*. Diodorus' source shifts the scene to the palace and the court; and thereby the beginnings of human culture are made over in the image of Ptolemaic Egypt.[42]

The contrast is great, but not so great as it was later to become. For social factors are not altogether eliminated from the perspective of Diodorus 1.11 ff. In the early history of the human race as there conceived, popular sentiment plays a definite, if minor, role; and on occasion the king-god even ceases for a moment to be a benefactor operating apart from the normal workings of society and becomes an individual bound to serve society by a sort of implicit compact which works to the advantage of both.[43] Euhemerus, by contrast, presents in his sociology as well as in his theology a more radical revision of earlier thought. The theory of deified kings by which Diodorus' source explained a portion of the Egyptian pantheon is applied by Euhemerus to all, or nearly all, of the Greek pantheon: the Hellenistic monarch, having first occupied the positions of Dionysus, Heracles, and the Egyptian Osiris, is now installed in the seat of Zeus himself.[44] And with this new conception of the origin of the gods goes a new view of the agents in the process of apotheosis. In the account used by Diodorus these are two: popular sentiment, which rewards benefactors like Isis and Osiris with godhood, and the action of the kings themselves—Osiris' establishing of temples to his ancestors. The first explanation is largely abandoned by Euhemerus (Uranus owes his kingdom but not his godhood to popular sentiment)[45] and for it another is substituted—Zeus' own self-deification (Lactantius, *Inst. div.*

[42] On the transformation described here see Kaerst, *Geschichte des Hellenismus* 2^2.322–25.

[43] Cf. 1.90.2 (from the passage already discussed, above, pp. 64–67, and Chap. VI, note 20): the Egyptians are especially given to rewarding benefactors, hoping thereby to encourage others to imitate their example; and cf. 1.43.6: the story of an original dynasty of benefactor kings may be no more than a useful fiction cultivated to make successors imitate their example.

[44] For what may be the starting point, in Democritean theory, for this innovation of Euhemerus, see Appendix IV.

[45] Popular sentiment is not altogether eliminated from consideration, for the theory presupposes among the masses a tendency to show awe and reverence for power. But the initiative in all instances comes from above, even if it is only in the form of action calculated to lead to deification: cf. Sextus, *Adv. math.* 9.17 (=*FGrH* 63T4c): οἱ περιγενόμενοι τῶν ἄλλων . . . σπουδάζοντες μείζονος θαυμασμοῦ καὶ σεμνότητος τυχεῖν ἀνέπλασαν περὶ αὑτοὺς . . . θείαν δύναμιν. (The only report of Euhemerus' doctrine which suggests a direct popular apotheosis is the very summary statement of Sextus, *Adv. math.* 9.51 = *FGrH* 63T4b.)

1.22.2 ff. = *FGrH* 63F23).[46] The tendency is clear: the history of the beginnings of culture and religion is coming to be seen more and more as a history of dynastic politics. And the tendency was to continue and grow more pronounced. Evident in Leo as well,[47] it produces in the *Libyca* of Dionysius Scytobrachion[48] a work in which the romantic and fantastic adventures of the divine royal house are almost the sole focus of interest.

The Egyptian reworking of Democritean *Kulturgeschichte* and its further transformation by Euhemerus and his followers brought it fairly quickly to a stage of development in which its basic characteristics were barely recognizable. There was, however, another realm of Hellenistic thought in which Democritean anthropology was found serviceable, and there, as we shall see, anthropology was better able to hold its own.

3. Philosophy and Politics (Polybius, the Academy, Nausiphanes)

If the immediate source for the Democritean material which appears in Polybius is to be sought in any of the major Hellenistic philosophical schools the most likely choice would be the Academy. The Democritean text or texts which served as a model for *Laws* III could well have remained in the library of the school, whence Polybius himself or, more probably, some member of the Academy—one uninfluenced by Plato's reinterpretation of Democritus—could have become acquainted with it and made use of it to produce the *Kulturgeschichte* that appears in Book VI. This Academic could hardly have been one of Plato's immediate successors, but his point of view fits well enough with some of the teaching of the Middle Academy.[49] In particular, the genealogy of morals which he would, on this theory, have transmitted to Polybius has a fairly clear parallel in Carneades. The latter was responsible for a classification of the principal Hellenistic ethical systems which was subsequently taken over by Antiochus and used frequently in Cicero (cf. *Ac.* 2.130–31; *Fin.* 2.33–43; 4.49–50; 5.16–22; *Tusc.* 5.84–85; *Leg.* 1.37–39). The starting point for this *Carneadea divisio* are divergences in attitude toward the basic *telos* of human activity—that which is *aptum et*

[46] Regarded by Schwartz (*RhM* 40.260) and Jacoby (*RE* 14.2759) as the characteristic and distinguishing feature of Euhemerism. The innovation is certainly indicative of the basic tendency of Euhemerus' doctrines, but it does not seem to me to be as important as his extension of the category of *epigeioi theoi* to include major members of the Greek pantheon. Cf. Vallauri, *PubblTorino* 12, No. 5, 15: "l'autodivinizzazione segne l'ultimo passo dell' euemerismo, non già il primo."

[47] The changes which are introduced into Leo's account of the discovery of grain (see above, p. 158) have the effect of transforming an episode involving ruler and *dêmos* into one in which all participants are members of the royal house.

[48] On the general character of Dionysius' account, see Vallauri, *PubblTorino* 12, No. 5, [illegible]

[49] The affinities between Polybius and the Middle Academy are discussed by Heinemann, *Poseidonios' metaphysische Schriften* 1.19–25.

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accommodatum naturae . . . et tale ut ipsum per se invitaret et alliceret appetitum animi, quem ὁρμήν Graeci vocant (*Fin.* 5.17; cf. ὁρμώντων κατὰ φύσιν at the beginning of Polybius' account of the origin of morality, 6.6.2). Since right conduct is conduct directed toward this end, the ethical position of each school is closely dependent on its conception of what the end is—pleasure, for example (Aristippus), or absence of pain (Hieronymus), or certain *prôta kata physin* such as health, personal safety, freedom from pain, strength, and beauty (the Stoics, Carneades himself, and, with modifications, the Peripatetics and Academics). The Stoics differ from Carneades in that they make the aim of right conduct, not the *prôta kata physin* themselves, but merely the pursuit of them (presumably because the *honestum*, though it comes into being as a part of the later phases of man's pursuit of the *prôta kata physin*, is so important that actual attainment of the latter becomes incidental; see above, p. 139). For Carneades, however—though the view was advanced, according to Cicero, *non tam ut probaret quam ut Stoicis quibuscum bellum gerebat opponeret* (*Fin.* 2.42, cf. *Ac.* 2.131)—*honestum* remains a means only. The *fines* recognized by him are, like those of Aristippus, *expertes honestatis* (*Fin.* 2.35).

It is obvious that the moral *ennoiai* whose origin is described in Polybius VI bear a definite resemblance to this *honestum* of Carneades. Like it, they are a secondary phenomenon, a part of a system which facilitates the attainment of certain *prôta kata physin*—sexual satisfaction, security from outside attack, approbation of one's fellows—which are themselves *expertes honestatis*.

The two positions are not identical. Among Carneades' *prôta kata physin* are the characteristically Stoic ones involving the organism's consciousness of its own being: self-preservation, *sensus integri, ingeni motus* (*Fin.* 2.34–35); and the whole theory is couched in Stoic terminology[50] of which there is only the barest trace in Polybius (see Appendix III). The result is an argument which turns the Stoic *oikeiôsis* doctrine against itself in as striking a fashion as possible: the very *prôta kata physin* which had been the starting point of an idealist morality become the final object of a totally utilitarian one. Carneades is here displaying that perverseness and fondness for polemic which is characteristic of him, and of which there is no trace in Polybius.

One may thus exclude the possibility of direct borrowing from Carneades. But it is possible that both writers are influenced by a common source, an earlier Academic discussion which Carneades has clothed in Stoic terminology for purposes of polemic. The suggestion is consistent with what we know (admittedly very little) of Arcesilaus, who, like his successor, attacked Stoic dogmatism, but, unlike him, did not acquire a reputation for dialectical

[50] See M. Pohlenz, *AbhGöttingen* Folg. 3, 26.15–16.

sensationalism. It is unlikely that Arcesilaus' scepticism would have allowed him to accept a fully developed theory of cultural origins of the sort which Polybius proposes; but such a theory could well have been offered by him *disserendi causa*—as a sort of contrasted *logos* to the idealist and teleological treatments of the same subject put forward by Stoics and Peripatetics. We know from Cicero (*Top.* 82; cf. *Part. orat.* 62) that in the first century the question, *a naturane ius profectum sit an ab aliqua quasi condicione hominum et pactione*, was a standard *thesis* in the Academic course of rhetoric; and the practice of arguing on both sides of a question was one introduced into the Academy by Arcesilaus (D. L. 4.28).

The evidence advanced thus far shows than an Academic source for the Democritean material in Polybius is at least possible;[51] and there are certain things in Polybius' own work which make such a theory very attractive. By accepting it we can account for Polybius' rather puzzling statement (6.5.1) that his theory of the rise and fall of states is presented "in greater detail in Plato and certain other authors"—a statement which reveals anything but a direct acquaintance with Plato, but which would be natural enough in reference to a theory derived from an Academic teacher, the exact source of which Polybius did not know; we can account for the aetiological perspective whose presence in Polybius' account has already been noted (above, p. 129)—for it would have been as an *aetiology* of moral *ennoiai* that a piece of Democritean *Kulturgeschichte* found its way into the discussions of the Academy; and we can also account for the fact that the Academy is the only contemporary school which Polybius mentions by name. The passage in question (12.26c) is critical—an attack on the ὑπερβολὴν τῆς παραδοξολογίας in which its members indulged. But the point of view Polybius adopts is not so much that of the dogmatist who rejects all doubt as that of the moderate sceptic who finds that even τὰ καλῶς ἀπορούμενα (26c3) are brought into discredit by an excessive use of the method. The passage can be taken, therefore, as a protest offered by one sympathetic in general to the school against some of the extreme positions it adopted. Finally, one should note that it was Academic philosophy of a sort which was most intimately linked with the history of the Achaean league, in the person of Polybius' fellow-townsmen Ecdemus and Megalophanes.[52] The two men were disciples of Arcesilaus, friends and political advisors of Aratus of Sicyon (Plutarch, *Aratus* 5 and 7), teachers of Philopoemen (Polybius 10.22.2), and, according

[51] Doxographical tradition, for what it is worth, links Arcesilaus to Democritus via Pyrrhon of Elis. Cf. Clement, *Strom.* 1.64 (Pyrrhon and Democritus); D. L. 9.61 = *VS* 72A2 (Pyrrhon the pupil of the Democritean Anaxarchus); D. L. 4.33 (Arcesilaus and Pyrrhon); and D. L. 9.114–15 (Arcesilaus and Pyrrhon's pupil Timon—on whose fondness for the works of Democritus see D. L. 9.67).

[52] Or Ecdelus and Demophanes; see *RE* s. v. (10.2159 and 29.143).

to Plutarch (*Philopoemen* 1), "foremost in their time among those who applied the teachings of philosophy to politics and practical affairs." The body of tradition which lies behind Book VI could have been expected, given the theory of expanding political and social *koinôniai* which it embodies (see above, pp. 107–10, 115–16), to have a particular appeal for Aratus and Philopoemen; for they were the two men largely responsible for the policy under which the Achaean league grew from purely ethnic beginnings into a confederation whose aim it was to make the entire Peloponnesus one *polis*.[53] The heir to this political program was Polybius' father Lycortas. Polybius himself was familiar with Aratus' Memoirs,[54] and he must have learned something about the views of Ecdemus and Megalophanes when he composed his laudatory life of their pupil Philopoemen.[55]

The last piece of evidence is important in that it suggests the possibility of political as well as philosophical affinity between Polybius and the Academy. The two cornerstones of Aratus' policies were support of republican regimes against tyrannies and unification of the Peloponnese. A similar political program emerges from the third book of the *Laws*, which is devoted in part to showing how a highly desirable arrangement—the original unity of the Peloponnese under the Heraclids—was destroyed because of the failure of two of the original three Dorian states to provide adequate constitutional safeguards against tyrannical abuses of power by their rulers.[56] And if Ecdemus and Megalophanes could have found support for their program in *Laws* III, so too could they have found support for their view that philosophy and participation in public life went together. Behind the whole anthropological and historical excursus of that book lies the same conviction which is responsible for the anthropological and historical excursus of Polybius VI—namely, that the past history of political regimes as studied by the philosopher contains lessons of vital importance for the man who would inaugurate or guide a successful political regime himself.

[53] For the possible "philosophical" roots of this political program see Plutarch's statement that Ecdemus and Megalophanes educated their pupil ὡς κοινὸν ὄφελος τῇ Ἑλλάδι τὸν ἄνδρα τοῦτον ἀπὸ φιλοσοφίας ἀπεργαζόμενοι (*Philopoemen* 1).

[54] See 2.56.2; 2.47.11; 2.40.4 with Walbank *ad loc.*; as well as the detailed account of the political settlement effected after Aratus' capture of Sicyon that appears in Cicero, *Off.* 2.81–83. Cicero's source in this work is Panaetius, and it is reasonable to assume that it was Polybius' interest in Aratus and his policies which drew Panaetius' attention to this episode in Achaean history—perhaps during those discussions of political theory which the two men are reported to have held in Rome (Cicero, *Rep.* 1.34).

[55] The brief summary of Philopoemen's career given in the tenth book of the *Histories* records one piece of instruction they gave (22.5); the biography may well have provided much richer documentation. One of the subjects it stressed was the *paidikê agôgê* which produced Philopoemen (10.21.6).

[56] See 690D–93C and, for a more succinct statement of the same contention, *Ep.* 8.354B.

There may well have been, then, among the more politically minded of Plato's followers,[57] some who looked to *Laws* III for support for their programs; and who may, on occasion, have looked even beyond *Laws* III to the Democritean theory which inspired Plato's and which, like Plato's, could be interpreted so as to lend support to the aims of republican federalism.[58] This suggestion can be supported by two other bodies of evidence which also point to the existence of such a group of philosopher-politicians.

The first of these is composed of the *testimonia* relating to the philosopher Nausiphanes, who, beginning probably in the late 330's,[59] was head of a flourishing school of philosophy and rhetoric in his native Teos (Sextus, *Adv. math.* 1.2). His unorthodox contention (*VS* 75B2, p. 248.18–19) that it was the part of the *sophos* to take part in political life drew from Philodemus a polemic, portions of which survive (*Rhetorica* II, pp. 1–50 Sudhaus).[60] Nausiphanes' central contention was that the philosopher's knowledge of *physiologia* would put him in a position of advantage in political life. Psychology rather than anthropology and political history is the *physiologia* to which Nausiphanes refers, at least in surviving fragments, so that the link between philosophy and politics which he envisions is somewhat different from that posited in *Laws* III and Polybius VI. Moreover, even when the fragments touch on matters treated in Book VI, the parallels, though present, are generic rather than specific in character. Like the Stoics, and like Polybius in his genealogy of morals, Nausiphanes seems to have been concerned with the role played by the *prôta kata physin* (see above, p. 164) in human motivation, for he speaks of a *syngenikon telos* that determines what all men of

[57] For the tradition of political activity in the early Academy see Bignone, *L'Aristotele perduto* 2.249–51 and P. M. Schuhl, "Platon et l'activité politique de l'Académie," *REG* 59 (1946) 46–53.

[58] The reconstruction of political history of which Polybius' *Kulturgeschichte* forms a part culminates, of course, in a defense of that most republican of all regimes, the mixed constitution, with its balance and separation of powers. In classifying constitutions and in identifying the best one with a blend of monarchy, aristocracy, and democracy, Polybius is following sources which are unlikely to go back to Democritus. On the other hand, these aspects of the political theory of Book VI are distinct from the notion of an equilibrium of political forces as a prerequisite for the rule of law and justice. The latter idea is just as prominent in the book, and is certainly implicit both in the *Kulturgeschichte* of 5.7–6.12 and in the later chapters that are most closely connected with 5.7–6.12. (On the composite character of Polybius' political theory see, in general, Cole, *Historia* 13.465–78.) The unspoken contract between rulers and people on which kingship rests is an example of such an equilibrium, and it is the disruption of this and similar balances established between rulers and people in aristocratic and democratic regimes which, in Polybius' view, always leads to disaster (cf. 6.7.6–8; 6.8.4–6; 6.9.5–6; 6.57.5–9). The political theory which emerges from Polybius' *Kulturgeschichte* is also in basic accord with what can be reconstructed from the fragments of Democritus—see above, Chap. VIII, note 14, and H. Rehm, *Geschichte der Staatsrechtswissenschaft* (Freiburg and Leipzig 1896) 52–53.

[59] For the chronology of Nausiphanes' life, see von Fritz, *RE* 32.2021–23.

[60] They are discussed and analyzed in Sudhaus, *RhM* 48.336–41; von Arnim, *Leben und Werk des Dio von Prusa* 43–62; Philippson, 438–46; and von Fritz, *RE* 32.2024–26.

necessity seek and avoid;[61] and knowledge of that *telos* will enable the political orator when confronted with an audience *γινώσκειν ὃ βούλεται ἡ φύσις καὶ λέγειν καὶ λέγοντα τὸ πρὸς τὴν βούλησιν ⟨λογίζεσθαι⟩ δυνήσεσθαι* (col. 8.5–9, p. 10 Sudhaus; cf. 7.7–10, p. 9; XXIV 1–7, p. 18). Though concerned primarily with rhetoric, he evidently felt that monarch as well as orator could profit from philosophical wisdom (26.5–9, p. 39), and the participation of the *sophos* in public life is rewarded, like the services of the king in Polybius' *Kulturgeschichte*, by honor, popular respect, and grateful memory for skill expended in the services of society.[62] It is even possible that Nausiphanes, like Polybius, saw in society's ability to profit from the example and instruction offered by its outstanding members something characteristically human which distinguishes the race from the other animals.[63]

The resemblances, though they might be more extensive did more of Nausiphanes survive, do not allow us to go much further than to say that Polybius' view of the complementary relationship of philosophy and politics would have been warmly endorsed by Nausiphanes and vice versa. But Nausiphanes is clearly the sort of philosopher-politician whose existence the evidence examined earlier in this section led us to posit, and his philosophical affinities are just what one would expect on the basis of that same evidence —Academic and Democritean. The immediate source for his notion of an alliance between psychology and rhetoric is surely the program outlined by Socrates in *Phaedrus* 271C–72B,[64] and doxographical tradition makes him a follower of Democritus.

Nausiphanes was the teacher of Epicurus (Usener 114; *VS* 75A1–9) and so perhaps the *Mittelquelle* for the Democritean material which appears in Hermarchus. Whatever the extent and character of his indebtedness to Nausiphanes, Epicurus eventually broke with him; and it is a fair guess that one of the things which caused the break was the former's high evaluation of rhetoric and the *pragmatikos bios*. The Epicurean critique of the linking of *physiologia* and rhetoric is at least as old as Metrodorus,[65] and probably goes

[61] Cf. XVI 2, p. 8 Sudhaus, where there is mention of a [τ]*έλος*; XVI 4–6: *εἰ] μὲ[ν ἔσ]τι τ[ι]ς ἄνθρ[ωπος, πρὸς] τοῦτ[ο φ]έρε[τ]αι*; and XVI 12–13: *οὐδέ τὰ ζῷα [ἄλλ]ον ἐπιδ[έ]χεται τ[ρ]όπον*. There is some fluctuation in terminology (*syngenikon telos* is attested in XXIII 14–15, p. 17, and restored by von Arnim in XVI 2, p. 8, along with *symphytou telous* in XVII 19–20, p. 10); and the expression itself may not go back to Nausiphanes (von Fritz, *RE* 32.2024). But the general character of the notion and its affinities to what figures in Book VI are fairly clear.

[62] 22.3–8, p. 33: *τὸ τίμιον καὶ ἀξιόλογον ἐν ταῖς παρὰ τῶν πολλῶν δόξαις καὶ μνήμαις ἐπὶ πολιτικαῖς διανοήσει*. For Nausiphanes' utilitarianism see also XXIV 1–8, p. 18.

[63] This, at any rate, seems to be the view which Philodemus is attacking when he criticizes Nausiphanes for failing to establish *μέχρι τίνος ὠφελεῖσθαι τὰ πλήθη δύναται καὶ κουφίζεσθαι . . . μᾶλλον δύναται τῶν ἄλλων ζώων* (XXXVI 19–22.2, p. 33).

[64] Cf. F. Susemihl, "Aphorismen zu Demokrit," *Philologus* 60 (1901) 190.

[65] Author of a *πρὸς τοὺς ἀπὸ φυσιολογίας λέγοντας ἀγαθοὺς εἶναι ῥήτορας* (Frs. 25–27 Koerte).

back to the founder of the school himself. It would thus take its place alongside the unfavorable judgment on kingship pronounced in *RS* 6 and 7 and reproduced in Lucretius V (see above, p. 127) as part of a general attack against defenders of the active life. We cannot be sure who the objects of this attack were in the early days of the school; Nausiphanes was doubtless one of them, though not necessarily the only one.[66] But the existence of the attack provides further documentation for the tradition of philosophy linked to politics we are examining; and the context in which Lucretius' translation of *RS* 7 appears suggests that Epicurus' opponents may have on occasion linked their defense of political life to *Kulturgeschichte*[67] and an account of the first successful *politikos* in human history—the king. The reasons for linking such an account both with Polybius and Democritus have already been given (above, pp. 122–28).

The evidence discussed in this section is fragmentary but, seen in its entirety, fairly significant. The linking of similar anthropological theories to a political program of a federalistic, anti-tyrannical tendency, which appears in Polybius and *Laws* III; the role played in Achaean history by two Academic philosophers dedicated to furthering this program; the parallels between Polybius and Carneades; the former's own direct references to Plato and the Academy; the character of the Epicurean polemic against defenders of the active life and its association with *Kulturgeschichte* in Lucretius V; and the presence of the Democritean Nausiphanes among those who are most likely to have been the object of this attack—all point with noteworthy consistency to a single conclusion. We are fairly safe, I think, in assuming that there existed in the late fourth and third centuries a number of thinkers—of primarily though not exclusively Academic affinities—who attempted to view the problems of city-state politics in the light of what they

[66] Bignone has argued at length (*L'Aristotele perduto* 2.49–55, 88–112, 247–70) in favor of the view that the primary object of Epicurus' attacks was the "scuola platonico-peripatetica". Cf. Philodemus' criticism of Aristotle's overly favorable evaluation of *rhêtorikê* and *politikê* (*Rhet.* II, cols. XLVIII 21–LVIII 9, pp. 50–64 Sudhaus). It is with this "scuola" rather than with Nausiphanes (as maintained by Sudhaus, *RhM* 48.333–35, and R. Philippson, "Timokrates," *RE* A11 [1936] 1269) that Bignone would associate the one opponent whose name we know for sure—the renegade Epicurean Timocrates. The latter was a contemporary of Metrodorus, who addresses him on two occasions as *physiologe* (*ap.* Plutarch, *Non posse suav. viv.* 16.1098D and Athenaeus 7.280A = Frs. 39–40 Koerte) and rejects his political theory with the remark recorded by Plutarch (16.1098C): *οὐδὲν . . . δεῖ τοὺς Ἕλληνας σώζειν οὐδὲ ἐπὶ σοφίᾳ στεφάνου παρ' αὐτῶν τυγχάνειν ἀλλ' ἐσθίειν καὶ πίνειν* (Fr. 41 Koerte). Another suggestion as to the identity of Epicurus' opponents is offered by H. M. Hubbell, who sees in 23.11–13, p. 35 (*οἱ τοὺς νόμους καὶ τὰς πολιτείας γράφοντες τῶν σοφιστῶν*) a possible reference to followers of Isocrates "who continued their master's practice of broadening their instruction in rhetoric by theoretical work on the science of government" ("The Rhetorica of Philodemus," *Trans. and Proc. of the Connecticut Academy of Sciences* 23 [1920] 326, note 15).

[67] Cf. von Fritz's suggestions with regard to Nausiphanes, *RE* 32.2026. It is clear that Nausiphanes believed some types of historical investigation to be of value to the politician: cf. 27.1–7, p. 40, on reasoning from *symbebêkotôn* in political affairs.

called philosophy, and that this "philosophy," though doubtless composed largely of commonplaces, could have included a psychology and a sociology influenced by the theory of the origins of culture which was originated by Democritus and modified to suit his own purposes by Plato in the third book of the *Laws*. That one or more of the members of this tradition should have preserved a version of Democritean *Kulturgeschichte* detailed enough to form the basis for what appears in Polybius VI seems to me fairly likely, and it is rather unlikely that we shall come nearer to an identification of Polybius' source than this. But we have come near enough, I think, to provide a background against which the conclusions reached in Chapter Eight will seem far more natural and reasonable than they did when supported only by evidence drawn from Polybius VI, *Laws* III, and the fragments of Democritus.

4. A Comprehensive Restatement (the Epicureans)

We do not know in what work or works of Epicurus his account of the origins of culture appeared, nor into what context and with what purpose he introduced it. One may surmise, however, that, like Democritus, he was anxious to establish the purely natural character of a process often attributed to other causes[68]—more anxious, perhaps, since there was in his day a teleological as well as a theological interpretation of history which required refutation. The identity of purpose was enough to insure fairly close reproduction of many parts of the earlier doctrine.

Yet modifications there were, some of them fairly major; and inasmuch as Epicurus seems to have been less interested than Democritus in aetiology for its own sake, they are not likely to be gratuitous. Taken as a body, they provide our best single testimony to the shift of attitudes analyzed in the preceding chapter.

The basic tendency of the changes has already been indicated (above, pp. 78–79, 147): an emphasis on biological and environmental determinism at the expense of the play of chance and impulse, and an elimination of the variable element in the *physis-nomos-logos* triad in favor of the two constants *physis* and *logos*. The result is a doctrine which, though it does not make the development of culture proceed teleologically toward a goal, nevertheless envisions something much more narrowly circumscribed and with far fewer bypaths and dead ends than its Democritean counterpart. The random interplay of accident, suggestion, and a few basic givens of human nature, from which Democritus derived the growth of technology and society, is retained; but its workings are presented in such a fashion as to suggest a lack of confidence in the method. The process is helped along at every stage by a

[68] Cf. Diogenes of Oenoanda, Fr. 11 col. II 4–8 Grilli.

variety of extraneous considerations, behind whose presence one can usually detect the influence of non-Democritean sources. Dicaearchus or the Cynics have supplied the doctrine of the greater hardness of primitive man to make his survival in a hostile environment seem more probable;[69] Cynic influence may also be responsible for the prominence in Lucretius' account of the notion that fire, clothing, and indoor living soften man's disposition (see above, p. 22),[70] though the Cynics would not, like Epicurus, associate softness with greater sociability;[71] and Epicurus' own sensationalism completes this theory of social genesis by positing a spontaneous *prolêpsis* of *τοῦ συμφέροντος ἐν τῇ πρὸς ἀλλήλους κοινωνίᾳ* as the origin of morality. The formation of society becomes thereby something far more inevitable and immediate than the detour by way of *dynasteia* envisioned by Democritus.

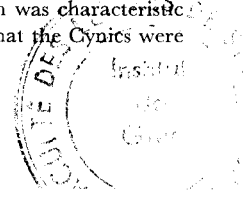
[69] Dicaearchus may be responsible for one other "primitivist" detail in Lucretius' account. Compare 5.990–1000 and Cicero, *Off.* 2.16 (=Fr. 24 Wehrli):

> unus enim tum quisque magis deprensus eorum
> pabula viva feris praebebat. . . .
> . . . . . .
> at non multa virum sub signis milia ducta
> una dies dabat exitio.

> est Dicaearchi liber de interitu hominis . . . qui collectis causis ceteris, eluvionis, pestilentiae, vastitatis, beluarum etiam multitudinis, quarum impetu docet quaedam hominum genera esse consumpta, deinde comparat quanto plures deleti sint homines hominum impetu, id est bellis aut seditionibus, quam omni reliqua calamitate.

[70] It is possible, of course, that the idea that fire and warmth should have at least some effect on man's character goes back to Democritus; cf., for a similar recognition of the effect of temperature on human disposition, the early medical treatise, *Airs, Waters, Places* 12 and 16. What is characteristically Epicurean and Cynic in Lucretius and Tzetzes is (1) the central position which the notion has in their accounts of the origin of society, and (2) the emphasis on the immediate physical and psychological effects of warm surroundings (rather than, say, on the greater dependence on others which the desire for warmth and related comforts would bring). In similar fashion, Lucretius' analysis of the role of the family in the formation of society stresses the softening of man's physical and psychic disposition (cf. 5.1017: *Venus imminuit viris*; 1018: *ingenium fregere superbum*); contrast Polybius' account, which is concerned with the habit of cooperation and exchange of services which family life breeds.

[71] The list of motifs which appear in Lucretius and Tzetzes but none of the other texts which we have isolated as belonging to the Democritean tradition is fairly extensive. To the parallels discussed in Chapter One (above, pp. 21–22) should be added Lucretius 5.957=*VS* II 138.1 (the role of necessity; see above, Chap. V, note 22); 5.945–52=114.16–18 Gaisford (primitive man as a water drinker; cf. above, note 4); and 5.998 (primitive man died *ignaros quid volnera vellent*)=*VS* II 137.38–39 (*ἀπέψυχον οὐκ εἰδότες ὅτι πάσχουσι*). It is natural to wonder whether, given these resemblances, the immediate source of Epicurus' whole *Kulturgeschichte* was not Cynic rather than Democritean (cf. also the parallel between Lucretius 5.973–76 and Theophrastus' account of the conversion of Diogenes, noted above, note 8). It is unlikely, however, that the Cynics would have given to the later stages of the development of culture the close attention which they receive in Lucretius. The two theories are probably to be regarded as at least partially independent modifications of Democritean thought. They reveal, however, the common influence of the "hard" primitivism which was characteristically Cynic and of the preoccupation with *physis* which was characteristic of most Hellenistic thought on the origin of culture. (It is possible, of course, that the Cynics were directly indebted to the Epicureans; but see above, note 16).



The theories of Greek ethnology on the cultural importance of climate and environment are invoked to explain the linguistic variety whose origin Epicurus is unwilling to leave to chance and an initial random selection; and, in what may stem from a re-elaboration of the pre-Socratic idea of the mortality of the world with ideas drawn from medical studies of the growth and decay of organisms,[72] Epicurus links portions of the cultural cycle to fixed phases in the growth and decay of the natural world.[73] Finally, the passage at the end of Lucretius V on the *cacumen* reached by civilization may reveal the influence of the Aristotelian idea of a genesis, growth, and acme in each of the arts;[74] and Book VI opens (1–41) with a passage whose inspiration may be equally Aristotelian: Epicurus comes to minister to the psychic needs of a world whose bodily wants are provided for by the technological achievements of Athens. In similar fashion, philosophic speculation replaces pursuit of the useful and pleasurable in the scheme of human development posited in the *De philosophia* (see above, p. 52).

Some of these motifs appear in fifth century literature[75] and may have had a part—though probably a subordinate one—in the system of Democritus. Others may be due, not to Epicurus, but to someone among his successors. Yet their total tendency is too much of a piece to suppose that they do not reflect, in the main, the work of a single intelligence—one aspect of the channeling and damming effected in the course of those Democritean streams *quibus Epicurus hortulos suos irrigavit.*[76]

[72] See Solmsen, *AJP* 74.34–51. The close analogy developed in Lucretius (2.1023–89, 1105–72; 5.943–44) between organic and cosmic growth and decay is not attested before Epicurus.

[73] Other influences as well may be at work here. Grilli (*RendIstLomb* 86.12–19) has advanced reasons for believing that certain details in Lucretius' account of the character of the earliest human life represent an effort to counter Peripatetic arguments (partially reproduced in Philo, *Aet. mundi* 55 ff.) against the theory of the spontaneous generation of mankind. The departure from the normal mode of genesis to which the Peripatetics objected is made slightly less extreme by having man born, not, as he evidently was in the zoogonies of Democritus and other pre-Socratics, full-grown, but as an infant who is subsequently nourished by *uteri* in the earth. And the unlikelihood of such a creature's surviving is mitigated by the theory of the mild climate and fruitfulness of the earth in the early stages of its growth. The Democritean answer to such objections would have been, surely, that in most instances and in most worlds the creature did not survive; and it is interesting that Epicurus did not, so far as we can ascertain, make use of this argument. Elsewhere (*Ad. Herod.* 74) he rejects the Democritean idea that there are worlds without life; evidently the idea of a world without men was equally unacceptable to him. Epicurus here adopts a position rather similar to the teleological one which he purports to be attacking. Nor is this an isolated instance. Cf., for certain geometrical or almost "biological" regularities in his atomism for which there is no parallel in Democritus, C. Mugler, "Sur quelques particularités de l'atomisme ancien," *RPh* 27 (1953) 149–60, and "L'isonomie des atomistes," *RPh* 30 (1956) 231–36; and the passages discussed by F. Solmsen, "Epicurus and Cosmological Heresies," *AJP* 72 (1951) 1–23.

[74] An idea which appears explicitly elsewhere in the book (5.324–37); see Bignone, *L'Aristotele perduto* 2.462–64.

[75] Cf. *Airs, Waters, Places* 12 and 16, cited above, note 70.

[76] The metaphor—a most appropriate one—is Cicero's (*ND* 1.120).

The Garden which resulted is one which bears a disturbing resemblance in spots to the closed and finite cultural universe described by Plato and Aristotle; and in general Epicurean *Kulturgeschichte* cannot help but be disappointing when compared with its Democritean model. It may allow on occasion for the working of a wider range of causes; but this variety does not stem from a greater complexity of thought. It is an indication rather of eclecticism and uncertainty, of a system which seeks to accommodate the bold and brilliant hypotheses of Democritus to the more unified and orderly framework of Academic and Peripatetic aetiology and fails to produce a satisfactory compromise. That this inadequate copy remained for nearly two thousand years the most satisfactory account of the origin of culture known to the West, an account which has its admirers even today, is a striking testimony to the quality of the original. The latter must have been an achievement of the first order, comparable in some ways to the Democritean system of the physical universe, though destined, like it, to be neglected and forgotten in later antiquity. The fate of the one as well as the other constitutes an irreparable loss to our knowledge of ancient thought.

APPENDIX ONE

DIODORUS 1.7–8*

Diodorus 1.7 begins with a cosmogony which tells how, in the beginning, the four elements emerged from a primeval condition in which earth and sky were as yet of a single aspect. Fire separated from air, rising to form the heavens; earth and water remained, dividing eventually into land and sea.[1] The earth, still soft and muddy, began to grow warm under the rays of the sun and became swollen in its moister spots with pustules. Within the thin membranes which surrounded these swellings spontaneous generation occurred. When the embryos so formed attained their full growth, the membranes burst, sending forth all kinds of living creatures to inhabit earth, air, and sea. Further hardening of the earth by the sun took away its capacity for bringing forth the larger species, which thereafter propagated themselves sexually. A similar cosmogony and zoogony, so Diodorus tells us, accounts for the lines in the *Melanippe* of Euripides which relate how earth, after her separation from sky, "brought forth into the light of day trees, birds, beasts, the nurslings of the sea, and the race of mortal men." Chapter 8 continued with the account, studied in detail in the text, of the earliest existence of these men, painful and brutish at first, but eventually transformed radically through the development of language, society, and technology.

It was Reinhardt's contention (495–98) that these two chapters appeared in Diodorus' source as a native version of cosmogony and prehistory, expounded by priests as a preface to their account of the earliest life in Egypt (1.10–29 in our present text). He based his theory on similarities between 1.7–8 and these later *logoi*, and on two passages, one in Diodorus (1.42.1) and one in Diogenes Laertius (1.10), which seemed to refer to just the sort of "Egyptian" cosmogony and zoogony whose existence he had posited.

Critics of Reinhardt's thesis have concentrated on the immediate compositional problems raised by the first of the arguments advanced in its support. They have noted contradictions between the narrative of 7–8 and that of the subsequent chapters (Jacoby, *FGrH* IIIa 39.26–37, and Spoerri, 129 and 163), or else maintained that the similarities which do exist involve

* Cf. page 16, with note 3.

[1] Whether air is viewed as containing what was eventually to become earth and water as well as fire is uncertain. Diodorus is unclear at this point, nor is there any exact parallel in other Greek cosmogonies; see Spoerri, 17–18, 31–33.

doctrines which were common knowledge in Diodorus' time (Spoerri, 163) and are hence insufficient to justify the assumption of what would have been, on Diodorus' part, a violent and gratuitous rearrangement of source material (Pfligersdorfer, *SBWien* 232, No. 5, 144). Further, they have pointed out (Spoerri, 114–15) that certain inconsistencies within the two chapters suggest a composite source for 7–8. Reinhardt's second argument has been allowed to go, for the most part, unnoticed and unrefuted.[2] Since it has considerable bearing on the issues raised by the first, it deserves restatement and re-examination.

The first book of Diodorus is divided into two parts, the second of which opens with a summary of what has gone before: "a proem on the whole subject and the accounts current among the Egyptians about the origin of the cosmos and the coming into being of all things from the beginning" (1.42.1). The cosmogony and pre-history referred to is the Egyptian one which Reinhardt assumed for Diodorus' source, and its appearance here gives considerable support to his theory.[3] The passage has been regarded as an interpolation (see Oldfather's edition, *ad loc.*). Its opening words, at any rate, cannot be by Diodorus,[4] and it contains in the portions not quoted here further omissions and inaccuracies such as one might expect from a careless editor. But it is hard to see how mere carelessness could result in the transformation of the general material of 1.7 into something specifically Egyptian. Nothing comparable appears in the summaries found in later books of Diodorus, and there is nothing in the book itself which would account for the error. The distinction between the Egyptian and non-Egyptian material is certainly clear enough as the text now stands. Such a mistake suggests confusion with another account, one in which 1.7 did have an Egyptian setting; and the person most likely to have made such a confusion would have been the author himself—remembering the account which he drew upon and, perhaps, reproduced more accurately in an earlier draft of his own work.[5]

[2] So Spoerri (115, note 5) dismisses 1.42.1 as too "ungenau und lückenhaft" to be of much significance. For Jacoby's treatment of the passage, see below, note 3.

[3] Jacoby (*FGrH* IIIA 30.24–25) refers the statement on the "origin of the cosmos and the coming into being of all things" to 1.10 and 1.11.5–12 (the first chapter of the Egyptian portion of Book I as it now stands and the subsequent Egyptian theology). But 1.10 contains nothing at all about the origin of the cosmos and is concerned with coming into being only as it involves the earliest inhabitants of Egypt, not all things; and 11.5–12 discusses the maintenance of the cosmos, not its formation. The reference must be, as Reinhardt assumes, to 1.7.

[4] This is clear from the way in which they refer to the author in the third person: "The first book of Diodorus being divided into two because of its length . . .." It is quite possible, however, that an original ἡ μὲν πρὸ ταύτης βίβλου περιέχει, or the like, was altered by an editor to make it clear that the section referred to is not an entire book but only half of one.

[5] For a comparable situation (in Book XIII) where a passage—this time a preface—seems to refer to a different recension, see R. Laqueur, "Diodorea," *Hermes* 86 (1958) 281–85.

This account may have left traces elsewhere. Diogenes Laertius, in his summary (1.10) of the "philosophical ideas of the Egyptians," reports that, according to them, "the first principle is matter and subsequently the four elements are differentiated out of it, and certain living creatures are engendered." Later in his report Diogenes mentions Hecataeus in connection with a point of Egyptian theology, and from this Reinhardt concluded that the whole passage is Hecataean. There is no justification for this (see *FGrH* IIIa, 39.11–18 and Spoerri, 55–56) but the importance of Diogenes' testimony is not thereby impaired. Whoever the source of Diogenes' information was, his account, like that with which the author of 1.42 was familiar, contained a cosmogony plus zoogony similar to that which appears in 1.7; and it presented it as the teaching of the Egyptians.[6]

If the evidence of these passages is to be disregarded, one must assume that Diodorus, in search of a general account to begin his history, hit upon the very one which in certain other Hellenistic texts was ascribed to the Egyptian priests whose theories on the origin of life in Egypt appear prominently in the first book of his own work. And one must also assume that the author of 1.42, by mere inadvertence, brought his own summary of the first half of the book into line with what was said in those same texts. This seems to be too much to ascribe to coincidence. Here, at any rate, Reinhardt's theory accounts for the evidence better than any other. The consequences of rejecting it are just as serious as the compositional problems relating to 7–8 which it raises. The latter, if they exist, cannot be ignored, but neither should they be allowed to occupy our exclusive attention.

Actually, however, a solution to these problems in keeping with Reinhardt's thesis is not impossible. It can be shown that certain peculiar features of 7–8 and their immediate surroundings are best explained by assuming an original arrangement of material differing only slightly from that which Reinhardt suggested.

Diodorus opens his entire work with a preface setting forth the merits and scope of history (1.1–3) as well as his own aims and methods (1.4.1–5). To this is appended a table of contents and a chronological note (1.4.6–5.2). Chapter 6 begins with a final remark on method: Diodorus will not give any separate treatment to the "views on the gods held by those who first established religious observances," but any relevant material will be appended in summary form as occasion arises (6.1). With regard, however, to "the

[6] To the parallels with D. L. 1.10 should be added those linking Diodorus' peculiar conception (above, note 1) of the role of air in the creation of the cosmos to what appears in certain Egyptian creation stories. The parallels are pointed out by Spoerri (116–17) but not sufficiently emphasized; cf. J. G. Griffith in his review of *Späthellenistische Berichte*, *JHS* 82.183: "Hecataeus, if the idea is Egyptian, might have proved an admirable source."

whole human race and the events which have transpired in the known parts of the world," he promises to give a record which begins with the earliest times and is as accurate as the remote character of the subject will allow (6.2). So far, all is clear. Traditionally, universal history of the sort Diodorus is writing might or might not open with a theogony.[7] Diodorus is choosing not to do so. The next sentence, however, introduces some serious difficulties:

> With regard to the original coming into being of mankind there have been two expressions of view among the most reputable of natural philosophers and historians. Those who posit a world without beginning and end declare that the human race also has existed from all time, its generation never having had a starting point. But those who suppose the world to have a beginning and an end say that, for mankind as well as for it, there is an original coming into being at definite times (6.3).

The reference in 6.2 to a record of "what has transpired in the known parts of the world" certainly seemed to prepare the way for a factual, nation-by-nation treatment of history. The present sentence, however, retraces ground abruptly to theories about the common beginning of the whole race, and to a subject—the origin of the cosmos—which properly speaking has nothing to do with the human race at all. The connection between 6.3 and what follows (Chapter 7) is equally tenuous. For the bulk of the latter chapter is a zoogony: the origin of the cosmos occupies a small space at its beginning, and the origin of man is not mentioned until the quotation from Euripides with which it closes (Spoerri, 114–15). 6.3 looks rather like an insertion intended to fill the gap between two unconnected subjects: the history of the separate nations of mankind and the spontaneous generation of life at the time of the origin of the cosmos. The transition is effected by a reference, commonplace enough (Spoerri, 206, note 3) to two of the most widely held views on the age of man and the cosmos. But neither of the conceptions so introduced, the one of the eternity of man and the cosmos, the other of their periodic recreation, is to receive any further development.[8]

A similar transitional character is evident in the passage which immediately follows the chapters which Reinhardt believed to have been displaced from their original position. Having concluded his account of man's

[7] So, for example, theogony was absent from Ephorus but present in Anaximenes of Lampsacus, whose procedure is cited by Diodorus himself in another context (15.89.3=*FGrH* 72T14). I see no reason to assume, with Spoerri (206, with note 2), the presence of Stoic influence here. The parallels he cites (*SVF* 2.168.13 and 169.23–24) are too general to be of any significance.

[8] In 1.10.4 a somewhat similar contrast is drawn between theories which trace the present race of men alternately to survivors of a flood or to a new brood created from earth after an earlier race had been completely destroyed. There, however, the bearing which both theories have on the subject at hand, the antiquity of the Egyptian race, is made quite clear.

earliest mode of existence (8.1–9) Diodorus proceeds to a consideration of "the earliest happenings in the known portions of the world of which any memory remains (9.1)." The mention of the known portions of the world recalls 6.2 (Spoerri, 207, with note 8), as if the writer were returning from a digression. If so, the process is one which requires the inclusion of more incidental material before it is complete. Diodorus first notes the difficulty of establishing who the first kings were—given the obvious newness relative to the institution of kingship of the art of writing, particularly that of writing history (9.2). The connection with the preceding is obscure. The "memory" of 9.1 may be written memory; hence 9.2 might have pertinence as a sort of footnote on the importance of written source material. But if so, the presence of the kings remains unexplained. Kingship is perhaps introduced as the example, par excellence, of an institution which, though mentioned or presupposed in all our earliest documents, must be assumed to antedate them. Yet if this is the idea behind the present passage, Diodorus must be excerpting from a larger context in which the thought was developed more fully.

The next sentence adds no clarification; it merely introduces a completely new idea. "With regard to antiquity of race, not only the Greeks, but also many of the Barbarians, put forward their claims, asserting their own autochthonous origin and priority in the development of useful inventions and keeping of written records (9.3)." Once again it is possible to trace a sort of tenuous connection with what has gone before. The argument might be expanded as follows: even the question of the origin of kingship is one which does not allow of solution because of its antiquity; how much more so that of the origin, not of a single institution, but of a whole race. But the perspectives of 9.2 and 9.3 can be harmonized only with difficulty. The former implies that the relative ages of written records are no criterion by which to judge the antiquity of the institutions which they describe; in the latter, Greeks and Barbarians are represented as offering the antiquity of their own written records as reliable testimony to the antiquity of their races. The connection between 9.2 and 9.3 is thus no clearer than that between 9.1 and 9.2.

It is only with 9.4 that a logical succession of ideas is re-established. Having mentioned the rival claims of different nations (9.3), Diodorus declines to adjudicate between them (9.4). His decision to begin with Egypt does not imply any such judgment: he is simply treating the Barbarians first in order not to have to interrupt his subsequent account of the Greeks (9.5), and the Egyptians before the others because of the general interest their history holds and the traditions of the births of the gods and the discovery of astronomy which are associated with it (9.6).

It is not likely to be coincidental that the first sentence of the chapter (9.3) to form part of a natural sequence of thought would be a perfect sequel to 6.2, the last one of that chapter to form part of such a sequence:

6.2 *περὶ δὲ τοῦ γένους τῶν ἁπάντων ἀνθρώπων καὶ τῶν πραχθέντων ἐν τοῖς γνωριζομένοις μέρεσι τῆς οἰκουμένης, ὡς ἂν ἐνδέχηται περὶ τῶν οὕτω παλαιῶν, ἀκριβῶς ἀναγράψομεν ἀπὸ τῶν ἀρχαιοτάτων χρόνων ἀρξάμενοι.*

9.3 *περὶ δὲ τῆς τοῦ γένους ἀρχαιότητος οὐ μόνον ἀμφισβητοῦσιν Ἕλληνες, ἀλλὰ καὶ πολλοὶ τῶν βαρβάρων . . . λέγοντες . . . τὰς γενομένας παρ' αὐτοῖς πράξεις ἐκ πλείστων χρόνων ἀναγραφῆς ἠξιῶσθαι.*

Diodorus sets forth his subject: the human race and its *praxeis* in different parts of the world. The record is to start from earliest times and be as accurate as the nature of the subject will allow. There is an initial difficulty: Greeks and Barbarians are not agreed as to who were the earliest representatives of the race, and have different views about the age of the *praxeis* which are on record for their part of the *oikoumenê*. Diodorus will not decide the dispute, but will treat the subject in the order dictated by convenience. And so to the beginning of the Aegyptiaca. Here everything follows with perfect economy and logic of treatment and in what was, I believe, the original order—subsequently disrupted by the insertion (or transposition) of Chapters 7 and 8.

It is not hard to suggest a plausible reason for the insertion. We know that 1.1–5 was written,[9] or at least revised,[10] after the rest of the work was completed. The passage is labored and pompous, the work of "a small man with pretensions" (Nock, *JRS* 49.5): history is the most nearly perfect of human disciplines; it is at once more delightful than poetry and more salutary than law codes; it memorializes the common achievements and characteristics which link all men to one another as citizens of a single race and cosmos—and Diodorus' work is the most complete and perfect specimen of the genre yet put before the public. In writing or revising these lines Diodorus may well have felt a certain uneasiness. Chapters 7 and 8 are the result: an effort to bridge the gap between the high-sounding rhetoric of the preface and the uninspired collection of excerpts which follows. For they do deal with humanity as a whole in the manner promised. Summary accounts of the beginnings of the cosmos and human life were doubtless available in the first century B.C., and it was perhaps a vague familiarity with the *topos* which suggested to Diodorus the general lines which the revision of his text should take. Yet, as the patchwork around 7 and 8 shows, the whole plan was an

[9] As suggested by Reinhardt (498), calling attention to 1.4.6: *ἐπεὶ δ' ἡ μὲν ὑπόθεσις ἔχει τέλος, αἱ βίβλοι δὲ μέχρι τοῦ νῦν ἀνέκδοτοι τυγχάνουσιν οὖσαι.*

[10] See Laqueur (above, note 5) 286–89.

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afterthought, imperfectly conceived and carelessly executed. If the material which could supply him with the details of his treatment was already on hand in a later portion of Book I, it is unlikely that Diodorus would have bothered to look for something similar elsewhere. Given the undisputed antiquity of their tradition, the views of the "Egyptians" on the beginnings of things could be expected to be as reliable as any.[11] The expedient resorted to did some violence to Diodorus' source, but was a perfectly natural one under the circumstances.[12] It has left its traces, not simply in the extraneous material which surrounds 7 and 8 in their present setting, but also, as we shall see, in certain gaps which their removal created in the old one.

Chapter 10 begins by giving the Egyptians' reasons for believing that their country was the earliest home of mankind. These are two: the fertility of the Nile valley, which supplies of its own accord abundant sustenance for life, and the *eukrasia* of their land. The *eukrasia* mentioned is presumably the temperate character of the Egyptian climate: the absence of the extremes of heat and cold which would make life difficult or impossible.[13] Diodorus does not, however, bother to give such a clarification; instead he launches, rather abruptly, into an attempt to show, on other grounds, why the spontaneous generation, not simply of men, but of all living creatures, must have begun in Egypt (1.10.2–3):

> And they seek to offer in support of the theory of an initial spontaneous generation in their land the fact that even now in the Thebaid on certain occasions the generation of mice in such numbers and of such size occurs that those who observe it are astounded. For some of them are formed up to the chest and the forefeet and are capable of movement, but have the remaining portion of their body unformed, the mud still remaining in its natural state. And from this it is evident that at the time of the original creation of the cosmos, when the earth was temperately mixed, Egypt above all other places would have been the scene of the generation of men.[14] For now, when the rest of the earth produces nothing

[11] Cf. the similar procedure in Porphyry, *De abstinentia* 2.5 (=Theophrastus, *Περὶ εὐσεβείας*, Fr. 1.1–9 Pötscher), where it is assumed that the forms of sacrifice first practiced by the Egyptians were the earliest known to mankind in general.

[12] A similar transfer doubtless explains the reappearance of a portion of the general anthropology of 1.8 in the specifically Indian context of Book II (1.8.9=2.38.2).

[13] Cf. the very similar passage in Justin 2.1.5: "inter Scythas et Aegyptios diu contestio de generis vetustate fuerit, Aegyptiis praedicantibus . . . Aegyptum ita temperatum semper fuisse ut neque hiberna frigora nec aestivi solis ardores incolas eius premerent: solum ita fecundum ut alimentorum in usum hominum nulla terra feracior fuerit. iure igitur ibi primum homines natos videri debere ubi educari facillime possent." Here fertility and *eukrasia* are linked in exactly the same way as they are in Diodorus. Temperate climate and fertile soil often appear in passages dedicated to the praise of a particular region. See Firmicus Maternus, *Math.* 1.7.16; Plato, *Timaeus* 24c; Dionysius, *Antiq. Rom.* 1.37.5; Herodotus 3.106; Euripides, Fr. 981 (*TGF* 677).

[14] *κατὰ τὴν ἐξ ἀρχῆς τοῦ κόσμου σύστασιν τῆς γῆς εὐκράτου καθεστώσης μάλιστ' ἂν ἔσχε τὴν γένεσιν τῶν ἀνθρώπων ἡ κατ' Αἴγυπτον χώρα.* Oldfather translates as if the *γῆς* were Egypt. But if this were

of the kind, it is here only that the phenomenal spontaneous generation of some living things is observed.

Two ideas are presented here, the second of them somewhat obscurely (see Spoerri, 209, note 15). It is natural enough to adduce contemporary spontaneous generation as evidence for its former occurrence (10.2), but it is less easy to see why the fact that no other country produces animals in this fashion proves that Egypt once produced men in the same way (10.3). Moreover, *eukrasia* now characterizes, not Egypt, but the whole earth, and the word seems to have a new meaning. The maintenance of life is favored by a temperate climate, but as the precondition of its generation Greek zoology and ethnology usually posited a mixture, not of heat and cold, but of heat and moisture.[15] The words, "at the time of the origin of the cosmos when the earth was temperately mixed," must refer to the process described in Chapter 7: the mingling of the sun's warmth with the moisture of an earth only recently separated from the sea. The resulting *eukrasia* made the earth as a whole much more suited to the spontaneous generation of living things than it is now.[16] And if the productivity of Egypt surpassed that of the rest of the world then as it does now, the country was obviously the one most likely to bring forth the greatest profusion of living things, man among them.[17] 10.2–3 must have once been part of an argument developed more

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Diodorus' meaning one would expect a participial phrase modifying *χώρα* rather than a genitive absolute; and *καθεστώσης* suggests a temporary condition, not the permanent *eukrasia* which characterizes Egypt.

[15] *Eukrasia* is so defined later in the same chapter (10.5), where the air is said to become *eukratotaton* through a mingling of *epombria* and *kauma*. Cf. also Theophrastus, *Caus. plant.* 3.22.3; Pausanias 8.29.4; and Diodorus 3.2.1 (quoted below, note 17). From the purely climatic standpoint of 10.1, a mixture of heat and moisture need not be *eukratos* at all: cf. in the discussion of the intemperate climates of Scythia and Egypt which is preserved in Photius (*Cod.* 249 441A16–18), the statement that the Egyptians *ὑπὸ θάλπους πυκνουμένης τῆς ἐπιφανείας τοῦ σώματος καὶ ἀπολαμβανομένου ἐντὸς τοῦ θερμοῦ πολλοῦ καὶ τοῦ ὑγροῦ τὸ δύσκρατον ἐκληρώσαντο.*

[16] See 7.6, on the inability to produce larger forms of life which comes with the gradual hardening of the earth. *Eukrasia* is not mentioned explicitly in Chapter 7, but the idea is surely present. Cf., in the very similar zoogony of Ovid's *Metamorphoses* I to which Spoerri (117–19) has called attention, lines 430–31: *ubi temperiem sumpsere umorque calorque | concipiunt.*

[17] Compare the somewhat similar line of reasoning which appears in a passage from the Ethiopian chapters of Diodorus (3.2.1): "And that those who dwell in the south are likely to have been the first products of spontaneous generation is plain for all to see. For, since it was the sun's heat which dried the earth when it was still wet at the time of the coming into being of all things and caused spontaneous generation, it is likely that the place nearest the sun would first bring forth living creatures." The only difference is that here it is not unusual productivity, but the possession, to an unusual degree, of one of the prerequisites for such productivity, which is assumed to have characterized the initial as well as the later periods of a country's history and made it particularly suited for spontaneous generation. The parallel is even closer if, as is possible, the argument of 10.2–3 in its original form related Egypt's present productivity to the unusual *eukrasia* which, on certain occasions, its soil possesses. See below, note 19.

fully along those lines. Basic to this argument is the material now contained in Chapter 7. Reinhardt's theory of an original connection between 7 and 10 is more than possible: it is almost necessary.

It seems likely, as against Reinhardt, that 7 did not originally precede 10 (8 intervening) but was combined more closely with it in a manner which cannot now be exactly determined. A passage[18] which in one family of manuscripts appears between 7 and 8 may have something to do with this original version:

> And as for the generation of living creatures from the earth, they say that even if this seem paradoxical to some, the earth's former potency is borne out by what continues to occur even now. For in the Aegyptian Thebaid, when the Nile flood has made the soil moist and the sudden warming action of the sun has caused fermentation at many points along the surface, a countless number of mice are born from the earth. And they say that it is obvious, what with the generation of animals taking place in spite of the earth's having become hard and the surrounding atmosphere's having lost its original *eukrasia*, that at the time of the original coming into being of the entire world all kinds of living creatures were generated from the earth.

Here, just as in 10.2–3, the contemporary phenomenon of the spontaneous generation of mice in the Thebaid is adduced in support of the theory of an original spontaneous generation of all living creatures. There is no mention of the half-formed specimens described in 10, but the mice are said to appear during the time of the Nile flood when the warmth of the sun interacts with the wet soil.[19] The final portion of the passage, though not completely intelligible as the Greek text now stands,[20] seems to present an argument rather similar to the one just reconstructed in connection with 10.3: if, despite the increased hardness of the earth and the decreased *eukrasia* of the surrounding air, spontaneous generation still occurs, it is obvious that at one time all living creatures must have been produced in this way.[21] Everything in the passage either clarifies and completes, or else reproduces with slight

[18] Printed in the *apparatus* to Vogel's edition, Vol. I, 13–14.

[19] The condition so produced is obviously one of unusual *eukrasia*, and this fact may have played a part in the argument Diodorus is abridging. The exceptional *eukrasia* brought about by the flooding of the Nile would have made the country, at the beginning of things as well as now, far more productive of life than the rest of the world—hence best able to engender men. Here *eukrasia* plays the same role as southerly location in the argument of 3.2.1 (see above, note 17).

[20] The translation given above rests on Spoerri's plausible conjecture (224, addendum to p. 209, note 15) of *ἐπεὶ οὖν* for *ὑπό τ' οὖν* at the beginning of the last sentence in the passage.

[21] Here it is the atmosphere rather than the earth which is *eukratos*. Obviously, however, the two varieties of *eukrasia* are closely related. In 7.4 both the moisture of the earth and the *homichlê* of the night air combine with the sun's heat to further the process of generation; and, as has already been pointed out (above, note 15), 10.5 speaks of a mingling of *epombria* and *kauma* which makes the air *εὐκρατότατον πρὸς τὴν ἐξ ἀρχῆς τῶν πάντων ζῳογονίαν*.

modifications, the material of 10.2–3. It is as if Diodorus had first divided, with little regard for continuity of thought, a single account into two sections so that it could be incorporated in Chapters 7 and 10, then rewritten a portion of one of these sections so that it could appear in the other chapter as well. Later the duplicated material to be included in Chapter 7 was marked for omission, but retained by inadvertence in some editions.[22] It is impossible to tell which of the two versions preserved is the original one. For our present purposes, however, the answer to this question is unimportant. Either alternative points to the original connection of 7 and 10.

To locate the original context of 1.8 is more difficult. Reinhardt assumed that it came between 7 and 10, but the analysis given above suggests that these two chapters were once part of a single whole. It is even conceivable that, while 1.7 was taken from the Aegyptiaca, 1.8 has a different source altogether. But the parallels between Diodorus and Vitruvius discussed above (pp. 15–16, 40–42, 60–61 and Chap. II, notes 10–11) suggest otherwise. The similarities between the two authors and the appearance in the Aegyptiaca of material which obviously comes from the same source as 1.8 (see above, pp. 16–17) may be explained in one of three ways. Either (1) Diodorus is drawing directly on the same source from which Vitruvius drew and is himself responsible for the Egyptian setting of the Hephaestus episode (1.13.3 = Vitruvius 33.16–23; see above, p. 15); or (2) Diodorus is drawing on an intermediate source in which 1.13.3 had already received its Egyptian setting. In the latter event either (2a) this intermediate source is not identical with the source of 1.8.3 and 9 (= Vitruvius 33.24–28, 34.2–6, and 36.1–8; see above, pp. 33 and 40; or (2b) it is identical, in which case 1.8.3 and 9, like 1.13.3, must have once had an Egyptian setting, from which they have been removed by Diodorus himself.

Of the three possibilities, 2b is by far the most likely. That Diodorus should have transferred an episode from one context to another in the manner posited by hypothesis 1 is quite possible. But the Hephaestus episode is so similar in its conception of the inventive process to Leo's account of the Egyptian discovery of wool (see above, p. 39) that independent origin is unlikely; and this, along with the other parallels linking Diodorus 1.13–29 to Leo (see above, pp. 153–54) makes it unreasonable to assume any but an "Egyptian" source for 1.13.3. It is equally unreasonable to assume that 1.13.3 goes back, through some "Egyptian" intermediary, to the same source as 1.8.3 and 9 in the same book (2a). Hypothesis 2b, besides being the

[22] The quotation from Euripides in 7.7 is perhaps an addition of Diodorus to replace this passage. For the mention of the loss of the earth's capacity to generate larger creatures, which precedes the quotation, leads naturally into the detail about the Theban mice.

least unlikely in itself, gains support from the fact that the procedure it envisions is the same as seems to have been responsible for the present form of Chapter 7.

There is additional evidence which points to the same conclusion. Reinhardt noted (496) that most of the material in 1.8 has close parallels in the Aegyptiaca. These are not always sufficient in themselves to guarantee a unity of source: parallels as close, or nearly as close, can often be adduced in other works. What is more significant is the fact that the two parts of Book I not only resemble, but also complement and complete each other, just as do 1.7 and 1.10.

The opening sentence of 1.8 should be compared with a later description of the "earliest way of life" pursued by the Egyptians:

> The earliest men lived in a disordered and animal-like condition, proceeding in scattered fashion to pastures and consuming the most suitable grass and the wild fruits from the trees. (1.8.1)
>
> In former times, at the earliest stage of their existence, the Egyptians subsisted on grass and the roots and stems of swamp plants. First, and in greatest quantities, they consumed the so-called *agrôstis* plant because of its unusual sweetness and the sufficiency of the nourishment it provided the human body—for they observed it was suited to animals and swiftly increased the size of their bodies. (1.43.1)

Section 8.1 reports that men fed on the most suitable grass; 43.1 explains how men hit upon its use: by observing its effect on other animals.[23] The presence of the latter is in turn explained by the phrase "proceeding to pastures" in 8.1: man's earliest life was a nomadic one which would naturally bring him into close contact with other grazing animals.

The reference in 8.1 to the disordered and animal-like condition of the earliest men is closely connected with the following passage (8.2–4), which describes how, out of this condition, society arose. The immediate impulse for its creation comes from man's struggle for survival against other species. Fear and the teachings of *to sympheron* create the first aggregations; within each of these primitive *systêmata* a common speech develops, and the resulting language groups become the ancestors of all the nations (*ethnê*) of the world. An exactly parallel account appears in 1.90 (above, p. 64). As the Egyptians are in the process of emerging from an animal-like existence, the weaker members of the race are taught by *to sympheron* to form protective *systêmata* against the stronger. Here, as in 1.8, the members of each *systêma* are linked together by a form of communication—an emblem (*sêmeion*) bearing the

[23] Texts which mention grass as man's earliest form of nourishment are fairly frequent (see Spoerri, *MusHelv* 18.78, notes 74–75). The two just considered are, however, the only ones which, to my knowledge, contain the detail about selecting from among the different grasses available.

representation of an animal—to which they rally in times of danger, and which, like language, operates as a unifying force through subsequent evolution: each Egyptian tribe (*ethnos*) worships the particular animal which proved to be the salvation of the *systêma* from which it is descended.

The developments traced in these passages are so similar that independent origin is unlikely;[24] it should be noted, moreover, that the basic idea fits better with the Egyptian context of 1.90 than with the more general one of 1.8. The notion that small groups of men speaking the same tongue may people large areas with their descendants is so familiar from the theories of nineteenth century philology that one tends to forget that it is somewhat inconsistent with the idea of spontaneous generation. Given the early productivity of the earth, the *systêmata* which arise "all over the world" (8.4) speaking different dialects, would be far more numerous than later national groups: Greeks, Persians, etc. Such groups could only come into being through the combination of a number of original *systêmata*; and of this there is no mention in either passage. No difficulty is involved, however, if the *ethnê* are not the nations of the *oikoumenê* but simply the tribes of a single country—localized groups which could easily be descended from a single *systêma*. The account which stands in 8.2–4 was probably completed originally by 16.1, which describes how Hermes "articulated the common dialect of the country" (presumably the language of all Egypt as distinguished from those of its individual *ethnê*)[25] and expanded its vocabulary.[26]

The final portion of Chapter 8 (5–9) describes man's earliest efforts to supply himself with the necessities of life. In the beginning there was no knowledge of cultivated food, or fire, or shelter, or clothing (8.5). Even the art of gathering wild food was unknown (8.6). The laborious process by which man learned to collect and store fruits is described in some detail (8.6–7). The other wants are dismissed in a single phrase: γνωσθέντος δὲ τοῦ πυρὸς καὶ τῶν ἄλλων χρησίμων (8.8). It is not likely to be mere coincidence that the subjects which receive such scant treatment here reappear at greater length in the Aegyptiaca. The discovery of fire is described in the

[24] As Uxkull-Gyllenband points out (27, note 15), 1.90 "gibt die beste Unterlage für Reinhardts These."

[25] Since 1.16 and 1.8 refer to different stages in the development of language, the contrast noted by Spoerri, *MusHelv* 18.73, note 55, between the gradual process described in the former and the individual act of creation which appears in the latter is no argument against unity of source.

[26] τήν τε κοινὴν διάλεκτον διαρθρωθῆναι καὶ πολλὰ τῶν ἀνωνύμων τυχεῖν προσηγορίας. This shows conclusively that the passage cannot be describing the original formation of language. Creation of a common language (i.e. choosing from among existing names for identical objects those which are to be accepted as standard) and naming objects for which no name yet exists are separate activities; the distinction could not exist were Hermes the original linguistic *nomothetês*—see above, p. 108. (Note also that Diodorus' phrase κοινὴ διάλεκτος would, in Hellenistic Greek, be more likely to suggest a *koinê* than the dialect of a single area.)

passage already quoted (above, p. 15); Isis and Osiris are responsible for the introduction of cultivated food (14.1); and, though there is nothing about clothing in Diodorus, Hermes appears as the inventor of weaving in a work which so resembles the chapters of the Aegyptiaca on divine inventors that it must be closely related to it: Leo's account of the origin of the Egyptian gods (see above, pp. 38–39 and 153–54).

These chapters (1.13–16), taken together with 1.8, produce an account of pre-history in which there are few gaps and, more strikingly perhaps, no duplications. No god is credited with teaching man how to gather and store fruits, or with assembling mankind out of his animal-like state, though such often appear as divine achievements in other passages of a euhemeristic character.[27] The one passage which might seem to offer such a duplication is 8.9. There the rise of technology is attributed to "need itself" which supplied "suitable instruction" to a "creature well-endowed and possessed of hands, rational speech, and mental sharpness as its co-workers in all things" (see above, p. 40). There is no mention of divine inventors and the whole conception of progress involved might seem rather different from that which appears in the Aegyptiaca. On the other hand, Hermes, Osiris, and their companions are all men to begin with (cf. 13.1: *ὑπάρξαντας θνητούς*) and only subsequently deified. If divine honors seem to be slightly excessive as rewards for individuals who simply possess in greater measure the generic qualities of the race,[28] this is an inconsistency within the Egyptian theology itself (see above, p. 16), not between its point of view and that of 8.9. It is, moreover, an inconsistency that is exactly paralleled in Diodorus' own Indica (2.35–42). There, after a sentence telling how the earliest Indians lived by food-gathering and clothed themselves in the skins of animals (38.2), the doctrine of 1.8.9 is restated and followed by an account of the achievements of the inventor-god Dionysus (38.3–6).

[27] Cf. Diodorus 2.38.5; 3.56.3, 63.3, 70.8, and 73.5; 5.65.3 and 68.1; and Philo of Byblos, *FGrH* 790F2, p. 807.21. Particularly striking is the comparison and contrast between 5.68.1 and 1.14.1:

Δήμητραν δέ, τοῦ σιτοῦ φυομένου μὲν ὡς ἔτυχε μετὰ τῆς ἄλλης βοτάνης ἀγνοουμένου δὲ παρ' ἀνθρώποις, πρώτην συγκομίσαι καὶ τὴν κατεργασίαν αὐτοῦ καὶ φυλακὴν ἐπινοῆσαι. (5.68.1)

εὑρούσης μὲν Ἴσιδος τόν τε τοῦ πυροῦ καὶ τῆς κριθῆς καρπόν, φυόμενον ὡς ἔτυχε κατὰ τὴν χώραν μετὰ τῆς ἄλλης βοτάνης, ἀγνοούμενον δὲ ὑπὸ τῶν ἀνθρώπων, τοῦ δὲ Ὀσίριδος ἐπινοησαμένου καὶ τὴν τούτων κατεργασίαν τῶν καρπῶν. . . . (1.14.1)

The passages are almost identical, except that 1.14 omits any reference to *συγκομίσαι* and *φυλακή*. The reason must be that Isis' gifts come to a people who have already learned *τὴν συγκομιδὴν τῆς ἀγρίας τροφῆς* (8.6) and *τῶν καρπῶν τοὺς φυλάττεσθαι δυναμένους ἀποτίθεσθαι* (8.7)—hence can apply the same process to *ἡμερὸς τροφή* without any teaching.

[28] On occasion, the "euhemerist" portions of Diodorus use in connection with divine inventors the terminology which 1.8 applies to man in general. So Daedalus is said to have received *isotheoi timai* because of his *euphyia* (1.97.6) and the inventor Dionysus achieves prominence because he is *ἀγχίνους καθ' ὑπερβολήν* (3.70.3).

If the above analysis is correct, 1.8 is not a unified whole but a collection of excerpts from different parts of another work—the one which served as a source for large portions of Diodorus' Aegyptiaca. A consideration of the arrangement of material within the chapter might lead independently to the same conclusion. There is a break in continuity between 8.4 and 8.5 (noted by Spoerri, 162, and *MusHelv* 18.77–78). At this point, after describing the origin of the *ethnê* of the world, Diodorus returns to man's primitive efforts to compensate for the absence of cultivated food and the other necessities of life. The former lack was mentioned at the beginning of the chapter, where the present passage would more logically go. In almost all other ancient specimens of *Kulturgeschichte*, the description of man's early life without agriculture, clothing, shelter, or fire forms a connected whole; and cave living is always mentioned before the formation of the first social aggregations[29]—not after, as it is here. Evidently it was difficult for the Greeks to imagine caves as social dwelling places.

If the order in which 8.2–4 and 8.5–9 appear suggests that they come from different sources, or from different portions of a single source, a slight contrast in tone between 8.1 and 8.5–9 suggests the same conclusion for those two passages. 8.1 contains no hint of the initial scarcity of food which figures prominently in 8.5–6, and the hardships endured in the course of learning to gather and store fruit are difficult to explain if, as 8.1 implies, primitive man was able to subsist on grass (cf. Spoerri, *MusHelv* 18.78). A somewhat similar contradiction is found within the Aegyptiaca. Sections 43.1 and 10.1 both envision an abundance of food—chiefly in the form of grass and various water plants—which grows spontaneously in Egypt; yet in 14.1 it is the invention of a stable food supply in the form of grain which puts an end to cannibalism. The contrast is the natural result of the presence within Diodorus' Egyptian chapters of two different perspectives. One is anthropological and ethnological, and deals with the life of the race as a whole; the other is theological and seeks to explain religious beliefs as the survival of honors once paid to benefactors and inventors.[30] The latter naturally attributes the development of civilization to these individuals; in the former, inventors and benefactors, if mentioned at all, remain anonymous. For the ethnologist, progress is gradual, often involving little more than a putting to use of what nature has provided; hence the tendency, given the patriotic

[29] Cf. the passages discussed or cited above, p. 29, with note 6. Tzetzes' account of primitive man does mention mutual defense against the beasts along with the absence of cultivated food, shelter, and clothing (*VS* II 137.41–42); but, unlike Diodorus, Tzetzes envisions no beginning point for society (see above, pp. 35–36).

[30] As the Hephaestus episode shows, however (see above, p. 16), the theological portions of the book have arisen, in part at least, through modification and adaptation of material whose perspective was anthropological.

spirit in which the Aegyptiaca is conceived, to emphasize as much as possible the exceptionally favorable circumstances for life provided by the valley of the Nile. Conversely, the honor paid to deified inventors seems more natural, and the catalogues of their achievements more impressive, if the magnitude of their benefactions is emphasized by as bleak as possible a picture of man's original helplessness. Moreover, since most of these benefactors are simply Greek culture heroes—Heracles, Dionysus, Demeter—in Egyptian dress, there is a tendency to conceive of this helplessness in terms which belong more to the Greek north than to the Egyptian south.

The passage on the earliest life of the Egyptians which has already been quoted in part (above, p. 184) illustrates both methodologies. The development described there proceeds in three phases: a period in which roots and grasses form man's diet (43.1–2); a second stage (43.3–4) where fish and meat are added, and garments of skins and houses of reeds come into use; and a final one which brings the discovery of edible grains (43.5). At this point the divine inventors make their appearance, for the discovery of grain is attributed "by some, to Isis, by others to one of the early kings (43.5)." Moreover, "the priests say" that Hermes is the inventor of technology and the arts (τεχνῶν καὶ παιδειῶν), the kings of the necessities of life (43.6). The statements obviously refer back to the discovery of fire, grain, metallurgy, farming, music, and astronomy described in 1.13–16 and connect the theological account found there with the ethnological one of 43.1–4. The combination of the two perspectives creates some difficulties even within the confines of a single chapter. The extent of the king's contributions to the devising of the necessities of life is left unclear. The houses and garments of hide which characterize the second mode of life ought to belong to this category, but they are not, evidently, to be regarded as the work of the kings. The activity of the latter seems to presuppose a degree of original helplessness greater than that which Diodorus has in fact described in 43.1–4. The difficulties within 1.8 are of a rather analogous character. We have already seen that the references to man's earliest diet in 8.1 stand in complementary relationship to 43.1, whereas 8.5–9 stands in a similar relationship to 13–15. The two passages, with their milder and harsher views of man's earliest life, reflect exactly the contrasting tones of the later parts of Book I to which they are related by content.

Internal evidence from Diodorus, no less than the parallels with Vitruvius, make the theory of an "Egyptian" origin for 1.8 almost certain. The material of the chapter is twice-removed from its counterparts in the *De architectura*. The general *Kulturgeschichte* from which both Diodorus and Vitruvius ultimately derive was first transformed into a specifically Egyptian *archaiologia*. What was originally an account of the development of technology became

a catalogue of divine inventors (now 1.13–16), to which the description of man's earliest efforts to supply himself with the necessities of life (8.5–8 as the book now stands) must have been made to form a sort of preface.[31] In similar fashion, a general theory of the origin of language was used in describing the formation of those local dialects whose rise preceded the activity of the Egyptian Hermes. At this stage the statement about the grass diet of early man now found in 8.1 probably formed part of the more authentically Egyptian ethnology that eventually became 43.1–4.

In the second stage of the process such portions of the narrative as could be easily divested of their Egyptian trappings were reassembled by Diodorus into a single unit (1.8). The general statement of the factors involved in the growth of technology—*cheires*, *logos*, *anchinoia*—formed a suitable summary and so appeared at the end of the chapter. The description of man's earliest quest for food and shelter immediately preceded it, just as, in the Aegyptiaca, it must have preceded the chapters devoted to divine inventors. The ethnological account of 43.1–4 was made to yield a more general remark about the earliest diet of mankind. This was then placed at the beginning of the chapter along with a reference to the initial disordered and animal-like condition of the race (1.8.1). The latter now serves as an introduction to the passage (1.8.2–4) on the banding together for protection against wild beasts and the subsequent development of language; and 8.1 may have appeared together with 8.2–4 in the Aegyptiaca as well (cf. the reference in 43.4 to eating the flesh and wearing the skins of animals). It is possible, however, that the initial steps in the development of language were treated only later, in conjunction with the account of the linguistic achievement of Hermes.

The process envisioned is rather complicated, but something of the sort must have occurred to create the complicated set of parallels linking 1.8, 1.13–16, 1.43, 1.90, and Vitruvius II.[32] And it is just possible that here, as in the case of the cosmogony and zoogony already discussed, an earlier version of Book I, more closely related to its source, has left traces in the existing text.

In Diodorus' summary of the contents of 1.1–41 (see above, pp. 175–76), an account of the life of early man is mentioned. Like the zoogony referred

[31] The related account (see above, pp. 153–54) of Euhemerus may have had a similar preface. The summary in Sextus (=*FGrH* 63T4c) begins with the phrase ὅτ' ἄτακτος ἦν ἀνθρώπων βίος. Cf. also Dionysius Scytobrachion, *FGrH* 32F7, p. 235.25–26=Diodorus 3.56.3.

[32] Pfligersdorfer, while recognizing the connections between 1.8 and the rest of the book, assumes that the former is drawn from a work of Posidonius, bits of which were inserted by Diodorus into the Hecataean material of the Aegyptiaca as well (*SBWien* 232, No. 5, 143–44; followed here by Gigon, *Gnomon* 33.775). It is unlikely, however, that connections as extensive as those which link the two portions of Book I could have arisen in this fashion; and the untenability of Pfligersdorfer's basic premise—the Posidonian origin of 1.7–8—has been amply demonstrated by Spoerri, *MusHelv* 18.63–82.

to in the same enumeration, this account seems to be thought of as forming a part of the teachings of the Egyptians.[33] The passage involves a further departure from the order of Book I as it now stands: it places the account, not before the *theologoumena* (11–29 in our present text) but between a discussion of the gods—"all those who founded cities in Egypt bearing their names"—and an account of "the honors paid to the immortals and the establishment of temples." The mention of eponymous gods is found in 11.6, and the second item seems to refer to the institution of temples and divine honors for Zeus and Hera which appears in 15.3–4. The narrative summarized in 42 evidently introduced the description of the earliest life of the Egyptians between parts of what is now a single *theologoumena*. The discrepancy is, once again (see above, p. 175) more than one would expect of an editor and, conceivably, reproduces an earlier version of the book.

There is, in fact, a division in the *theologoumena* as it now stands into a treatment of the *ouranioi theoi*—the heavenly bodies and the five elements—and the earthly ones—deified inventors and benefactors (see 13.1). Since the reference to the founding of cities occurs in the part on the *ouranioi*, it is reasonable to assume that these were the subject of the first theology referred to in 42; and similarly it would be the deified inventors who were the subject of the second. Since the heavenly gods obviously preceded, and the earthly ones followed, the beginnings of culture, a division of the book along the lines suggested in 42 is, in some ways, more logical than the present one. It is perhaps significant that a portion of the order of treatment envisioned in 42 appears in 43 (see above, p. 188), where the mention of Isis, Hermes, and the earliest kings—clearly earthly gods—immediately follows the account of the earliest life of the Egyptians.

Chapter 43, though it does not belong to the portion of the book summarized in 42, is rather oddly located. It is immediately followed by a long account of the Egyptian royal dynasties (44–68), and the break between the sections of the book would come more naturally after the chapter than before it. Such a division would correspond to that between history and prehistory. Moreover, Chapter 44 begins with a statement on chronology which would suitably mark the beginning of a new section; and in the summaries of Book I, Part II, which appear in 42.2 and 41.10, the mention of the earliest life of the Egyptians follows that of the earliest dynasties, as if it were put in as an afterthought.

I am inclined to believe, therefore, that the narrative in which 8.1 and

[33] The text, however, is not completely clear at this point. Strict logic requires that 1.42.1: *περί τε τῶν πρώτων γενομένων ἀνθρώπων καὶ τοῦ παλαιοτάτου βίου* be taken with *τὰ λεγόμενα παρ' Αἰγυπτίοις* rather than with *ἡ πρώτη βίβλος περιέχει*; perhaps, however, *περί* is being used more loosely, as if introducing syntactically independent items in a table of contents.

43.1–4 originally appeared was located after the account of the *ouranioi theoi* (now in 11–12) and before the extended account of the contributions to civilization made by divine inventors which begins in 13 and with which 8.5–9 was originally connected. The transfer of all material which was not specifically Egyptian to the preface tended to make the exact position of each of these inventors in the history of culture less apparent; hence it was natural to append the account of their achievements to the earlier theological passage. The remaining material (43.1–4)—too specifically Egyptian to go in the preface but not concerned with the gods—was somewhat inappropriately transferred, along with a brief summary (43.5–6) of the episode on divine inventors which once followed it, to the position in which it now stands.

The fragment on the antiquity of kingship (see above, p. 178) which is so out of place at the beginning of 1.9 may also be a relic of the "second theology." The observation that the recent origin of writing prevents exact knowledge of the remote past is found in other pieces of ancient *Kulturgeschichte* (Plato, *Timaeus* 23AB; Lucretius 5.1444–47—see above, p. 44). Lucretius adds that, as a result, reason and inference are the only sources of knowledge about this period. Inferring past conditions from present customs is one of the methods used in both the theological and ethnological passages of the *Aegyptiaca*,[34] so Diodorus' source could well have contained the sort of methodological passage from which 9.2 seems to be drawn. What is said there about the earliest kings would apply quite well to the divine inventors of the second *theologoumena*: rulers who lived 23,000 to 10,000 years before the writer's own time (see the chronological statements of 23.1, 26.1, and 44.1), hence, a Greek might assume, well before the composition of the priestly archives in which the record of their achievements was said to be preserved. The writer of 43.6 suspects that some of what is said about them may have no basis in priestly tradition at all, that the notion of the early benefactor-kings is simply a useful fiction to encourage successors to imitate their example. Obviously, however, he was not prepared to deny their existence altogether; hence, perhaps, he justified his inclusion of so much doubtfully authenticated material by noting that it is impossible to do otherwise and still attempt to trace the institution of kingship back to its beginnings. The original appearance of this statement in the portion of the work which immediately followed the description of the earliest life of the Egyptians[35] could have suggested its present location: after Diodorus' own description of the earliest life of all mankind.

[34] See 14.2 (giving of the first fruits of the grain harvest to Isis indicates that she was their discoverer); 43.2 (the use of grass in sacrifices shows that it was man's earliest food); 43.4 (reed houses found in parts of Egypt are survivals of a method of construction more widely prevalent in primitive times).

[35] The argument of the two sections (*palaiotatos bios* and second *theologoumena*) might have run

The *Entstehungsgeschichte* here proposed is rather more complicated than Reinhardt's. In place of his suggestion of 7, 8, 10–29 for the original order of chapters, I offer the following: 6.1–2; 9.3–6; 10+7 (cosmogony and zoogony); 11–12 (first *theologoumena*); 8.1 (or 8.1–4) +43.1–4 (the earliest life of the Egyptians); 8.5–9+13–29 (culture and divine inventors), with the possible addition of 43.6+9.2 (methodological considerations) and 8.2–4 (linked to 16.1—Hermes and language). Alternate schemes are obviously possible, so that the reconstruction must be put forward with much more diffidence than Reinhardt's original one. But the basic idea behind both proposals—that of the original unity of 7–8 and the Aegyptiaca—is independent of the details of the reconstruction just offered, resting as it does on parallels far too striking and too pervasive to be coincidental. Here, I am convinced, Reinhardt's ill-supported theory hit the mark.

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somewhat as follows: The earliest life of the Egyptians was transformed by a series of discoveries, the last of which was grain (43.1–4). This is attributed to Isis, and tradition credits the earliest kings with similar achievements (43.5). The validity of such stories is questionable: the institution of monarchy certainly antedates the keeping of written records (9.2), and other explanations for the origin of the tradition are possible (43.6). For what it is worth, however, the official version is that the Egyptians were raised from their primeval helplessness (8.5–8) by the work of inventors who became the first kings of the country and were honored as gods (13–29).

APPENDIX TWO

VITRUVIUS AND POSIDONIUS*

Vitruvius' analysis of the development of architecture (2.1.2–7 = 34.6–36.18 Rose) may be summarized as follows:

1. Housing began when men first built artificial caves and imitated the nests of birds (1.2 = 34.6–8).
2. Competing with one another and building on each other's achievements they became progressively more skilled (1.2–3 = 34.8–14).
3. The first houses were of stakes and interwoven branches covered with mud (1.3 = 34.14–15).
4. Other men made walls from bricks of mud and roofed them with reeds and foliage (1.3 = 34.15–18).
5. When the roofs so constructed collapsed under the rain, gables and eaves were devised (1.3 = 34.18–20).
6. (Primitive examples of housing can still be seen among the barbarian tribes of Europe and Asia) (1.4–6 = 34.21–35.24).
7. When, as men became more and more skilled, *consuetudo* developed into *ars*, certain members of society set themselves up as *fabri* (1.6 = 35.25–36.1).
8. From architecture men progressed to the other arts and so to the development of civilization (1.6 = 36.1–8).
9. Later, huts came to be replaced with houses built of brick, stone or tile—the result of the *maiores cogitationes* which arose from an increased *varietas artium* (1.7 = 36.8–12);
10. and from *vagantibus iudiciis* men arrived at *certas symmetriarum rationes* (1.7 = 36.12–14).
11. Once it had been observed that there was a *copia* of building material on hand, men proceeded to *ornare voluptatibus elegantiam vitae* (1.7 = 36.14–18).

On the basis of a few minor parallels with Seneca's 90th letter, early investigators[1] usually assumed that the source of this passage was Posidonius. The view was rejected by Meyer (*Laudes Inopiae* 51–54) and Reinhardt (*Poseidonios* 404–6), doubtless correctly. Reinhardt, however, detects two strata of composition in Vitruvius' account—one Posidonian (stages 3–6 and 9–11 above), one Democritean (1–2, 7–8). I see little reason for accepting

* Cf. Chap. II, notes 1, 26, and 35.

[1] Notably W. Poppe, *Vitruvs Quellen im 2. Buch 'de architectura'* (Diss. Kiel 1909) 6–9; followed by Rudberg, *Forschungen zu Poseidonios* 50; and Gerhäusser, *Der Protreptikos des Poseidonios* 28.

this view. Stage 6 is fairly clearly a digression and may well be Posidonian, but there is almost nothing in the rest of the passage which justifies the assumption of two sources, one of which is teleological in character.

It is true, as Reinhardt points out, that 3–5 and 8–11 trace six successive stages in the growth of architecture, whereas 1, 2, 7, and 8 are more general or deal with architecture in its social aspects. But the account forms a logical whole from which it is difficult to detach any one set of items. In 3–5 are specific illustrations of the general principles enunciated in 1–2: imitation, competition, and progress through the accumulation of skills. The houses of mud and twigs of 3 are obviously imitations of the nests of birds; 4 mentions an alternate method of construction, perhaps initiated in competition with the first; and 5 describes an improvement brought about through increased skill and experience. Moreover, 7–8 are not, as Reinhardt claims (*Poseidonios* 405, note 1), a digression which disturbs the *Zusammenhang* between 5 and 9. Vitruvius views architecture as the basic technology; hence it is practiced initially by the whole population. The earliest buildings are such as are within the capacity of anyone to produce. When, however, the task comes to be entrusted to specialists (the *fabri* of 7—cf. Lucretius 5.1354–60) the rest are freed for other things; hence the digression in 8 to note that man proceeded from architecture to *ceteras artes et disciplinas*. Having thus shown architecture's place in the general scheme of cultural development, Vitruvius returns to trace its further progress, now exclusively in the hands of the *fabri* mentioned earlier.

Reinhardt also finds in 3–5 and 9–11 a "Konsequenz der Stufen welche soll sich eine Konsequenz des Menschengeistes selber zu erkennen geben: seine eingeborene Urteilskraft die ihn methodisch Schritt für Schritt die Möglichkeiten hindurchführt die ihm von der Natur gegeben sind.... Insofern also als zwischen Natur und Kunsten ein einheitlicher Zweckzusammenhang besteht, ist alles Erfinden kein Erschaffen, sondern Urteil und Beurteiling der Möglichkeiten die in diesem Zweckzusammenhang von Anfang an als feste Zahl enthalten sind" (*Poseidonios* 405). While this describes very well the sort of history of architecture one would expect from Posidonius, it does not, I think, describe the text we have before us. There is nothing *eingeborene* about the *iudicia* which are involved in the whole process: *iudicia* are made *meliora* in the same way hands are made *tritiores* (7 = 35.25)—by *usus*. Nor is there any real limit to the *Möglichkeiten*; they are limited only by the *varietas artium* which man creates—hence, one would assume, limitless. And the impulse for the first advance in architecture involves, not an unfolding of man's innate capacities, but a response to necessity: the inability of a flat roof to sustain a heavy rainfall. Vitruvius' point of view may profitably be compared and contrasted with one which,

though it need not be Posidonian, illustrates the latter's teleological conceptions well enough.[2] Grattius Faliscus (*Cynegetica* 6–9) tells us that the primeval rule of error lasted until men

> te sociam, Ratio, rebus sumpsere gerendis;
> hinc omne auxilium vitae rectusque reluxit
> ordo[3] et contiguas didicere ex artibus artes
> proserere.

Two details only in Vitruvius suggest the point of view Reinhardt describes: in 10, the passage from *vagantibus iudiciis* to *certas rationes*, as if some teleological end point had been reached; and, in 11, the reference to the bounty of nature: *profusos partus naturae et abundantem materiae copiam ad aedificationes ab ea comparatam.* But if these passages do reveal a teleological perspective (and the natural *copia* of 11 may be a Vitruvian modification suggested by the context in which the digression on architecture appears—see above, Chap. II, note 38), it is a perspective which intrudes only briefly. It is nowhere suggested that man's perception of the *copia naturae* is a realization toward which all the preceding stages of architectural development have tended; and the very order of 10 and 11, in which *voluptas* follows *certas rationes*, is anything but teleological.

[2] On Grattius and his sources see Spoerri, 162, note 8, with the earlier literature cited there.

[3] Compare the teleological language of Ps.-Lucian, *Am.* 34: technology supplies *to endeon* in the various arts, so that each one comes finally to perfection, like the sun obtaining to its proper splendor after a long night.

APPENDIX THREE

POLYBIUS AND THE STOICS*

The theory of a Stoic origin for all or parts of Polybius VI rests largely on parallels between 6.5–6 and *De officiis* 1.11–14 (from Panaetius).[1] The parallels are unquestionably present, but they have been, I believe, generally misinterpreted. If Cicero is giving an accurate account of his source (and the passage coincides well enough with an independent report of what is probably Panaetian doctrine in Aulus Gellius 12.5.7), Panaetius' view of the genesis of morality was a combination of the orthodox Stoic *oikeiôsis* theory (see above, pp. 138–39) with a different one, of a more utilitarian cast. It could hardly have served as the source for the more complete and consistent presentation of a utilitarian ethic which appears in Polybius. The relationship between Panaetius and Polybius is best brought out by considering their accounts in conjunction with a third—also from Cicero—in which the Stoic *oikeiôsis* doctrine appears in uncontaminated form. The substance of the two Ciceronian passages is given in the following excerpts:

A. De officiis 1.11–14	B. De finibus 3.20–21[2]
Principio generi animantium omni est a natura tributum ut se vitam corpusque tueatur, declinet ea quae nocitura videantur. . . .	Primum est officium, id enim appello καθῆκον, ut homo se conservet in naturae statu, ut deinceps ea teneat quae secundum naturam sint, pellatque contraria . . . prima est enim conciliatio hominum ad ea quae sunt secundum naturam.
Commune autem animantium omnium est coniunctionis appetitus procreandi causa et cura quaedam eorum quae procreata sint.	
Sed inter hominem et beluam hoc maxime interest quod . . . homo . . . rationis est particeps. . . . In primisque hominis est propria veri investigatio et inquisitio . . . nec vero parva illa vis naturae est rationisque quod unum hoc animal sentit quid sit ordo, quid sit quod	Simul autem cepit intellegentiam vel potius ἔννοιαν viditque rerum agendarum ordinem et ut ita dicam concordiam, multo eam pluris aestimavit quam omnia illa quae prima dilexerat atque ita cognitione et ratione collegit ut statueret in eo collocatum summum illud

* Cf. Chap. VI, note 5; Chap. VIII, notes 24 and 59; and Chap. X, p. 164.

[1] On the two passages see, most recently, H. Erbse, "Zur Entstehung des polybianischen Geschichtswerkes," *RhM* 94 (1951) 158–61.

[2] On the character of this passage—an exposition of the "orthodox" position of the Old Stoa—see Philippson, "M. Tullius Cicero, Philosophische Schriften," *RE* A13 (1939) 1139, and P. M. Valente, *L'éthique stoicienne chez Cicéron* (Paris 1956) 1–15.

deceat . . . constantem ordinem in consiliis factisque conservandam putat cavetque ne quid indecore . . . faciat . . . quibus ex rebus conflatur et efficitur id quod quaerimus honestum.

hominis per se laudandum et expetendum bonum quod . . . ὁμολογίαν Stoici, nos appellemus convenientiam. . . . Cum igitur in eo sit id bonum quo omnia referenda sunt, honeste facta ipsumque honestum. . . quamquam post oritur, tamen id solum vi sua et dignitate expetendum est. . . .

Like Polybius in Book VI, Cicero is attempting in these two passages to analyze the origin of men's notions of what is right and proper (cf., in Polybius 6.6.7, ἔννοια τοῦ καθήκοντος δυνάμεως, and, in 6.6.9, θεωρίαν . . . αἰσχροῦ καὶ καλοῦ καὶ τῆς τούτων πρὸς ἄλληλα διαφορᾶς; in B, *ennoia* and *kathêkon*; in A, *sentit quid sit . . . quod deceat . . . ne quid indecore faciat*; and, in B and A, *honestum*). Moreover, both Polybius and Cicero regard such notions as ultimately the product of natural impulses which men share with other animals (cf., at the beginning of the former's account of intercourse and child bearing in the first human herd, *hormôntôn kata physin* [6.6.2], and *commune . . . animantium omnium . . . coniunctionis appetitus* in A; and with the references to the instinct for self-preservation at the beginning of both B and A compare the Stoic doctrine preserved in D. L. 7.85: τὴν δὲ πρώτην ὁρμὴν . . . ἴσχειν τὸ ζῷον ἐπὶ τὸ τηρεῖν ἑαυτό). But these natural impulses are modified in some way by a special intellectual awareness (cf., in B, *cognitione et ratione collegit*; in A, *homo est rationis particeps*; and in Polybius' account of men's reactions to a signal instance of filial ingratitude, μόνοις αὐτοῖς μέτεστι νοῦ καὶ λογισμοῦ [6.6.4]).

Yet in Polybius and passage B, at any rate, the roles assigned both to impulse and reason are completely different. For Polybius, the natural instinct out of which morality arises is the desire for sexual union with others of their kind that is observed in all living things; in B it is consciousness of self and the instinct for self-preservation—the *oikeiôsis pros heauton* of Stoic ethical theory (see above, pp. 138–39).

Even greater is the contrast between the conceptions of *ratio* which appear in Polybius and B. For Polybius, reason is simply a utilitarian calculus which foresees the unpleasant consequences of recurring instances of filial ingratitude or failure to return services rendered. It is essentially the servant of the desires, a means of removing obstacles to their fulfilment. And the *kathêkon* which it perceives seems to be nothing more than a synonym for the socially desirable. B regards reason in a totally different light. Presumably it cannot operate apart from the appetites, but its function, as set forth in the passage beginning *simul autem cepit intellegentiam*, is to perceive a higher harmony according to which men should order their existence. Once perceived, this harmony supplants the original objects of instinctual *hormê* (cf., in a passage not quoted above, "sed quemadmodum saepe fit ut is qui

commendatus sit alicui eum pluris facit cui commendatus quam illum a quo sit, sic minime mirum est primo nos sapientiae commendari ab initiis naturae, post autem ipsam sapientiam nobis cariorem fieri quam illa sint a quibus ad hanc venerimus" [*Fin.* 3.23]). Intelligence operates on a base provided for it by the appetites, but it makes use of them only in order to supersede and transcend them.

Between the thoroughgoing utilitarianism of Polybius and the idealism of B, A occupies an intermediate and at times ambiguous position. Panaetius begins with the Stoic *oikeiôsis pros heauton*, in a passage which closely parallels its counterpart in B. Then, however, he shifts to a consideration of the same natural *hormê* with which Polybius is concerned, makes an analogous comparison between man and beast, and even gives a hint of the Polybian conception of reason as an instrument through which man is enabled to satisfy his desires more conveniently:

Polybius 6.6.2–5	De officiis 1.11–12
πάντων . . . πρὸς τὰς συνουσίας ὁρμώντων κατὰ φύσιν, ἐκ δὲ τούτων παιδοποιίας ἀποτελουμένης, ὁπότε τις τῶν ἐκτραφέντων εἰς ἡλικίαν ἱκόμενος μὴ νέμοι χάριν μηδ' ἀμύναι τούτοις οἷς ἐκτρέφοιτ' . . . δῆλον ὡς δυσαρεστεῖν καὶ προσκόπτειν εἰκὸς τοὺς συνόντας καὶ συνιδόντας	Commune autem animantium omnium est coniunctionis appetitus procreandi causa
τὴν γεγενημένην ἐκ τῶν γεννησάντων ἐπιμέλειαν . . . περὶ τὰ ἔκγονα . . . καὶ τροφήν. . . .	et cura quaedam eorum quae procreata sint.
τοῦ γὰρ γένους τῶν ἀνθρώπων ταύτῃ διαφέροντος τῶν ἄλλων ζῴων ᾗ μόνοις αὐτοῖς μέτεστι νοῦ καὶ λογισμοῦ . . . εἰκός. . . . [αὐτοὺς] ἐπισημαίνεσθαι τὸ γιγνόμενον καὶ δυσαρεστεῖσθαι τοῖς παροῦσι, προορωμένους τὸ μέλλον καὶ συλλογιζομένους ὅτι τὸ παραπλήσιον ἑκάστοις αὐτῶν συγκυρήσει. . . .	sed inter hominem et beluam hoc maxime interest quod haec tantum quantum sensu moveatur, ad id solum se accommodat, paulum admodum sentiens praeteritum aut futurum. homo autem, quod rationis est particeps, per quam consequentia cernit, causas rerum vidit earumque progressus et quasi antecessiones non ignorat, similitudines comparat rebusque praesentibus adiungit atque adnectit futuras, facile totius vitae cursum videt ad eamque degendam praeparat res necessarias. eademque natura vi rationis hominem homini conciliat et ad orationis et ad vitae societatem. . . .

Men, according to Panaetius, are like animals in that they care instinctively for their children, but unlike animals in that they foresee future eventualities and take steps to meet them (1.11). If, then, it is this same instinct acting in conjunction with reason that *hominem homini conciliat* (1.12), the meaning would seem to be that men seek the friendship of their fellows in order to achieve a greater degree of safety and security for their families. Yet it turns out that what Panaetius wishes to say is quite different (*Off.* 1.12):

> eademque natura vi rationis hominem homini conciliat et ad orationis et ad vitae societatem, ingeneratque in primis praecipuum quendam amorem in eos qui procreati sunt, impellitque ut hominum coetus et celebrationes et esse et a se obiri velit, ob easque causas studeat parare ea quae suppeditent et ad cultum et ad victum nec sibi soli sed coniugi liberis ceterisque quos caros habeat tuerique debeat.

Nature and reason are here presented as making men desire the fellowship of others for its intrinsic value, so that *cultus* and *victus* are sought not only for a man's own family, but for all those *quos caros habeat tuerique debeat.* Panaetius is obviously thinking in terms of a general social obligation, not in terms of the natural desires and rational calculation which seemed to be under discussion in what preceded. The whole preceding section has, in fact, somewhat the character of an interpolation. In the phrase *eademque natura vi rationis, natura* refers less to anything in that section than to *principio . . . a natura tributum* at the very start of the whole discussion (see above, p. 196). Moreover, although *ratio* is first mentioned (1.11) in such a way as to suggest that its function is to provide for a better satisfaction of desires which man shares with the animals, this function turns out (1.12) to be the very different one of converting a *cura quaedam eorum quae procreata sint* that is *communis amantium omnium* (1.11) into a *praecipuum quendam amorem* (1.12) that has as its object not only offspring but all mankind as well. Society and family cease to be, as was first hinted, institutions devised by reason for the better satisfaction of wants which man shares with the animals; they are, rather, things which rational nature seeks as good in themselves, in the same way that irrational nature seeks comfort and self-preservation.[3] Similarly, the

[3] Cf. the closely parallel discussion of human *ratio* and its effects in *De finibus* 2.45–47:

> Homines enim, etsi aliis multis, tamen hoc uno plurimum a bestiis differunt, quod rationem habent a natura datam mentemque acrem et vigentem celerrimeque multa simul agitantem et . . . sagacem, quae et causas rerum et consecutiones videat et similitudines transferat et disiuncta coniungat et cum praesentibus futura copulet omnemque complectatur vitae consequentis statum. eademque ratio fecit hominem hominum appetentem cumque iis natura et sermone et usu congruentem ut . . . non sibi se soli natum meminerit, sed patriae, sed suis, ut perexigua pars ipsi relinquatur. et quoniam eadem natura cupiditatem ingenuit homini veri videndi . . . his initiis inducti omnia vera diligimus . . . tum vana falsa fallentia odimus, ut fraudem periurium malitiam iniuriam. eadem ratio habet in se quiddam amplum atque magnificum . . . atque his tribus generibus honestorum notatis quartum sequitur . . . in quo inest ordo et moderatio.

Here Cicero gives an abridged version of the doctrine set forth more completely in *De officiis* 1.11–14, a version unencumbered by any utilitarian hints and overtones. But by eliminating the suggestion that the superiority of human *ratio* is evident in the way man goes about caring for his offspring, he eliminates even the tenuous and specious link which the other passage was able to establish between the purely calculative *ratio* which sees *causas rerum et consecutiones* and that other rational faculty which impels man to seek the society and aid of his fellows. (That utilitarian motifs have been removed from a common source to produce *Fin.* 2.45–47 rather than added to produce *Off.*

desire for theoretical knowledge (*veri investigatio atque inquisitio*: 1.13) and a perception of *quid sit ordo, quid deceat* (1.14) are further revelations of the qualities which distinguish man as a species from the animals. In attaining to them and to the *honestum* with which the analysis concludes, he is achieving the same realization of his rational nature that is described in the latter portion of *De finibus* 3.20–21.

The hybrid character of *De officiis* 1.11–14 should be evident. Its utilitarian elements, one should note, have a parallel in Lucretius V as well as in Polybius VI. The half-suppressed suggestion that men created societies in order to provide security for their families appears quite clearly in 5.1011–21:

> inde casas postquam ac pellis ignemque pararunt
> et mulier coniuncta viro concessit in unum
> . . . . . .
> . . . prolemque ex se videre creatam,
> tum genus humanum primum mollescere coepit.
> . . . . . .
> tunc et amicitiem coeperunt iungere aventes
> finitimi inter se nec laedere nec violari
> et pueros commendarunt muliebreque saeclum.

The passage has no counterpart in Polybius, but it could fit very well into the presentation of the rise of society which Polybius gives (see above, Chap. VIII, note 24). For the formation of friendships for the protection of one's family is a natural extension of the principle of self-protection which first brought men into herds. Indeed, one would expect such friendships to be among the first stable relationships to arise after the purely "natural" ones which link man with wife and parents with children. Clearly Lucretius and Polybius are somehow related to Panaetius, but the most natural explanation of the parallels is that the latter is attempting without complete success to modify the tradition which the former preserve more faithfully. The source of Panaetius' knowledge of this tradition may have been Polybius himself.[4]

Polybius' account, though not a product of *contaminatio* like Panaetius', is nevertheless not entirely free from alien elements. *Kathêkon* is certainly a Stoic term, and *ennoia*, though the word need not have had such connotations

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1.11–14 follows from a comparison of both passages with Aulus Gellius 12.5 [see above, p. 196], where there are explicit references to *utendi consili reputatio, utilitatis contemplatio,* and *commodorum delectus.*) The eliminations were necessary to accommodate the Panaetian *oikeiôsis* theory to its context in *Fin.* 2, which is an anti-Epicurean polemic designed to show *honestum esse aliquid . . . quod sit ipsum sua vi propter seque expetendum* (2.44; cf. Pohlenz, *AbhGöttingen* Folg. 3, 26.73–76, who suggests Antiochus as a *Mittelquelle* for 2.45–47).

[4] For a similar suggestion with regard to the political theories of Polybius and Panaetius see M. Pohlenz, "Panaitios," *RE* 36 (1949) 423, and R. Reitzenstein, "Die Idee des Principats bei Cicero und Augustus," *NGG* 1917, 406–7.

for Polybius (see above, pp. 81–82 with note 6), suggests in itself the idealist context of *Fin.* 3.20–21, not the utilitarian one of Book VI. Only in Cicero is *ennoia* a genuine piece of intellection, a perception of that ideal harmony in which the *summum bonum* for man lies. In Polybius reasoning is connected with the formation of moral concepts, but only indirectly. It is responsible merely for seeing the socially desirable and undesirable in a given situation. Moral concepts only develop later (cf. *hypoginesthai* in 6.6.9) by a process the nature of which is not specified. We must therefore reckon with the possibility that Polybius was acquainted—perhaps through Panaetius—with an account similar to *Fin.* 3–20–21, one which he recalled vaguely when he came to compose, on the basis of a very different source, his own description of the origin of morals. But one need not assume direct Stoic influence. By the second century B.C. certain elements of Stoicism had already achieved the status of philosophic *koinê*; in particular, Carneades used the terminology of the very *oikeiôsis* doctrine with which we are presently concerned as a means of describing and classifying all ethical systems (the famous *Carneadea divisio*—see above, pp. 163–64). The presence of Stoic terminology would thus be no sure indication of an acquaintance with Stoicism, even in a writer less careless in his terminology than Polybius. If there was any such acquaintance, its influence on the theories of Book VI was superficial.

APPENDIX FOUR

DEMOCRITUS B30 AND EUHEMERUS*

Democritus' theory of the origin of religion, which was probably reproduced in Diodorus' source,[1] is well known: men feared thunder, eclipses, and the like and assumed that gods were the cause of them (A75). The initial proclamation of this belief by certain members of a primitive society is presumably what is described in B30, a fragment which should be compared with two euhemeristic passages, one of them from Euhemerus' own account of the deification of Uranus,[2] the other from the version of the same event given by his follower Dionysius Scytobrachion (on whom see above, p. 163, with note 48).

A

τῶν λογίων ἀνθρώπων ὀλίγοι ἀνατείναντες τὰς χεῖρας ἐνταῦθα ὃν νῦν ἠέρα καλέομεν οἱ Ἕλληνες, πάντα, ⟨εἶπαν⟩, Ζεὺς μυθέεται καὶ διδοῖ καὶ ἀφαιρέεται καὶ βασιλεὺς οὗτος τῶν πάντων. (Democritus B30)

B

deinde Pan eum [Iovem] deducit in montem qui vocatur Caeli sella. postquam eo ascendit, contemplatus est late terras ibique in eo monte aram creat Caelo, primusque in ea ara Iuppiter sacrificavit. in eo loco suspexit in caelum quod nunc nominamus idque quod

C

μετὰ δὲ τὴν ἐξ ἀνθρώπων μετάστασιν . . . ἀθανάτους τιμὰς ἀπονεῖμαι [Οὐρανῷ] μεταγαγεῖν δ' αὐτοῦ τὴν προσηγορίαν ἐπὶ τὸν κόσμον . . . βασιλέα τῶν ὅλων ἀναγορεύσαντας. (Diodorus 3.56.5 = *FGrH* 32F7, p. 236.1–6)

* Cf. Chap. X, note 44.

[1] Cf. 1.11.1: the Egyptians began to worship the *ouranioi theoi* out of awe and wonder (καταπλαγέντας καὶ θαυμάσαντας) at the spectacle presented by the heavens. The passage in itself is too brief and vague to be linked either with Democritus A75 and B30 (see the works cited and criticized by Spoerri, 167, note 13) or with later theories which make religion a response to the admiration aroused by the beauty and order of the universe (so Spoerri himself, 166–69). Since, however, it appears in a context whose Democritean origin is likely on other grounds, it may well represent Diodorus' own summary of, or generalization from, what would have been recognizably Democritean in his source.

[2] The version of this account followed here is the one given by Ennius and reproduced in Lactantius. It conflicts with Diodorus' report of the same account (see above, Chap. X, note 29) but is far more likely to preserve an accurate record of what Euhemerus wrote. It tells in detail how the sky came to be named for Uranus, whereas Diodorus only notes in passing that Uranus got his name because he was the first to honor the *ouranioi theoi* (6.1.8 = *FGrH* 63F2, p. 303.15–16). It is obvious from the briefness of his resumé that Diodorus was not particularly interested in this portion of Euhemerus, hence might easily have misunderstood it. (For a suggestion as to how exactly the misunderstanding might have arisen, see below, note 6.) Even the far more detailed account (5.41–46) of the geography of Panchaea and neighboring islands which Diodorus drew from Euhemerus seems to have contained inaccuracies: see H. Braunert, "Die heilige Insel des Euhemeros," *RhM* 108 (1965) 255–68.

> supra mundum erat, quod aether vocabatur de sui avi nomine caelum nomen indidit; idque Iuppiter quod aether vocatur placans primus caelum nominavit, eamque hostiam quam ibi sacrificavit totam adolevit. (Lactantius, *Inst. div.* 1.11.63 = *FGrH* 63F21)

The meaning of A has been much discussed (see above, Chap. III, note 34), but attention has been focused on the meaning of *logioi*, rather to the exclusion of the rest of the passage. In particular, the implications of the phrases *βασιλεὺς οὗτος τῶν πάντων* and *ὃν νῦν ἠέρα καλέομεν* have not been sufficiently examined. The former shows that Democritus regarded the idea of divinity as somehow related to that of kingship. It is probably to be interpreted in the light of two statements, one in Isocrates (*Nicocles* 26), the other in Aristotle (*Pol.* 1.1252B24–27), which say that monarchy is assumed to exist among the gods because it is the earliest or most widespread form of government among men. The similarity of these two passages suggests derivation from a common, Sophistic source,[3] conceivably Democritus himself. The view which they embody seems, at any rate, to be related to the one developed in A. To give all and to take all away is the prerogative of the earthly king; religion comes into being when men assume the existence of an invisible king above them.

Democritus' speculation seems, however, to have gone a step further. In invoking Zeus men raise their hands to "what we Greeks now call air." Evidently, then, they did not call it "air" themselves. The name they used was, I suggest, "zeus", and what they said was (in translation) "Air is king."[4] Democritus has inferred (correctly, as we now know) that the name Zeus was, in origin, a common noun designating *ta meteôra*, one which, however, ceased

[3] See E. Maass, "Untersuchungen zur Geschichte der griechischen Prosa," *Hermes* 22 (1887) 588, who first pointed out the resemblances between the two passages; and E. Norden, *Agnostos Theos* (Leipzig 1913) 372, note 1, who compares the terminology used by Isocrates (kingship as the *katastasis* preferred by the *archaioi*) with similar fifth century usages (Protagoras B8b: *περὶ τῆς ἐν ἀρχῇ καταστάσεως*; Democritus B278: *ἀρχαίης τινὸς καταστάσιος*.)

[4] Cf., in a different context, Aristophanes, *Nubes* 264: *ὦ δέσποτ' ἄναξ ἀμέτρητ' Ἀήρ*, and Philodemus, *De piet.* 5a, p. 69 Gomperz (= *VS* II 103.3–5): *θέρος . . . χείμων καὶ . . . μεθόπωρον καὶ πάντα ταῦτα ἄνωθεν διειπετῆ γείνεται· διὸ δὴ καὶ τὸ ἐξεργαζόμενον γνόντας σέβεσθαι. οὐ φαίνεται δ' ἐμοὶ Δημόκριτος ὥσπερ ἔνιοι τόν. . . .* The passage seems to be reproducing Democritus' views on the origin of religion and harmonizes well enough with the reconstruction given in the text. As the use of the word *dieipetê* shows, the *exergazomenon* who is being honored here is Zeus; and the compound is one in which the meteorological associations of the root *dyeu-* are most evident; cf. the explanations given by Eustathius and the scholiasts of the phrase *διειπετέος ποταμοῖο* in *Od.* 4.477: *τὸ ἐκπίπτον ὕδωρ ἐκ Διὸς ὅ ἐστιν ἀέρος, τοῦ ἐξ ἀέρος ἀρδευομένου, τοῦ ὑπὸ Διὸς πληρουμένου.* (On the Zeus-air equation see, further, the parallels cited in Q. Cataudella, "Democrito Fr. 55B30 Vorsokr.," *Atene e Roma* 9 [1941] 77–80.)

to have this meaning after it had become the name of the god who controls *ta meteôra.*[5]

Turning from A to B and C, we find a considerable similarity both of expression and idea. Democritus' *logioi*, raising their hands to what we Greeks now call air, have their counterpart in Euhemerus' Zeus, raising his eyes to what we now call sky; and the *βασιλεὺς . . . τῶν πάντων* of A is exactly paralleled by *βασιλέα τῶν ὅλων* in C. What happens in B and C is not quite the same as what happens in A. In Democritus it is the office of kingship itself that is transferred to the skies by the personification of air; in Euhemerus and Dionysius it is a particular holder of the office who is so transferred. Yet this very difference is such as to suggest dependence of B and C on A. In referring to air Democritus must use the periphrasis *ὃν νῦν ἠέρα καλέομεν*; otherwise there would be confusion between the original and present meanings of "zeus." The parallel phrase in Euhemerus is not necessary; it would have been much easier to say simply that Jupiter raised his hands to aether and gave it for the first time the name of sky. For "aether", unlike "zeus", acquires no new meaning as a result of the deification. This peculiarity in Euhemerus' account suggests that he is recalling an earlier one in which a phrase parallel in meaning to *caelum quod nunc nominamus* was thoroughly in place.

The above considerations, taken in conjunction with the many parallels between Euhemerus and the Democritean material in Diodorus I (see above, pp. 153–54), make a Democritean origin for B and C fairly probable. If our analysis is correct, the stages by which Euhemerus' theory of religious origins arose out of its models may be set forth as follows:

A. Democritean version: (1) terror and wonder at atmospheric phenomena, followed by (2) personification of air as *basileus.*

B Version of source used by Diodorus: (1) wonder at spectacle of heavens, followed by (2) personification of heavenly bodies and elements, probably as *basileis*, followed by (3) addition of outstanding mortal kings to the pantheon so created.

C. Version of Euhemerus: (1) wonder at spectacle of heavens, followed by (2–3) identification or association of a particular mortal king with aether.

Stage 1 is not clearly attested in any surviving report of the *Sacred Chronicle*, but its presence there can be inferred with some plausibility. The *Caeli sella* mentioned in Ennius' version of the first deification reappears in Diodorus (5.44.6 = *FGrH* 63F3, p. 306.21), where it is said to be the spot from which

[5] In support of the interpretation advanced here one may note that it would be in keeping with the prominence of the *logioi* in the fragment that the genesis described be primarily an affair of semantics—one of those name transformations to which Democritus called attention in framing his *thesis* theory of the origin of language (B26; cf. above, pp. 67–68).

Uranus observed the sky and the stars. The two passages, taken in conjunction with Dionysius Scytobrachion *ap.* Diodorus 3.56.4 (=*FGrH* 32F7, p. 235.30–33), where Uranus is the first astronomer, make it reasonable to assume that Euhemerus credited Uranus with teaching men to observe and admire the heavens and their movements;[6] and it would be quite in keeping with the general tendency of the *Sacred Chronicle* (see above, pp. 162–63), that Stage 1 should thus be associated with an individual *heuretês*, rather than simply with popular feelings of marvel and awe.

It is possible, of course, that Uranus taught men not merely to marvel at the heavenly bodies, but also to worship them (cf. above, note 1). But by telescoping into a single stage (2–3) what had been two separate stages in the source used by Diodorus, Euhemerus has certainly eliminated the need for such *ouranioi theoi* in his theory. Either they were absent from his work altogether, or mentioned in it only to be totally disregarded at a later stage in the narrative (cf. above, Chap. X, note 29).

[6] It would have been natural for some of Uranus' discoveries to be named after him, and this may be the source of Diodorus' statement (6.1.8; cf. above, note 2) that Uranus *πρῶτον θυσίαις τιμῆσαι τοὺς οὐρανιοὺς θεούς· διὸ καὶ Οὐρανὸν προσαγορευθῆναι.* By reading *ouranon* for *Ouranon* (Jacoby, *RE* 11.957) or inserting *ton kosmon* after *dio* (Kaerst, *Geschichte des Hellenismus* 2^2.193–94, note 6, followed by van der Meer, *Euhemerus van Messene* 44) we can bring a portion at least of Diodorus' text into line with Lactantius 1.11.63 and with several other passages in later euhemerizers which speak of transferring a man's name to some part of the cosmos (Dionysius Scytobrachion, *FGrH* 32F7, p. 236.2–3, 236.36–237.1, 237.11–13; and Philo of Byblos, *FGrH* 790F1, p. 806.5–10; F2, p. 809.16–17; F3, p. 814.11–12). But the former change introduces an awkward shift of subject, the latter is needlessly drastic, and both posit a sequence of statements in Diodorus' text which would imply that Uranus' apotheosis occurred in his own lifetime rather than in that of his grandson. One would get better sense by reading *ouranious* for *ouranon*: "King Heaven was the first to honor the heavenly gods (i.e. sun, moon, and stars) with sacrifices, which is also why they were given the epithet 'heavenly'." (Cf. Diodorus 5.67.1, where Hyperion is called the "father" of the celestial bodies whose movements he discovers and charts.) The existence of the epithet *ouranioi* would of course facilitate the subsequent renaming of the region in which the bodies bearing it resided, as well as the identification of these celestial *ouranioi*, named after their discoverer, with the various mortal *ouranioi* (Venus, Mercury, Saturn, etc.), so called because of their descent from Uranus. Moreover, if Diodorus' report of Euhemerus has in fact transformed Uranus from an astronomer into the inventor of an astral religion it is easy to see how the misunderstanding might have arisen: a careless reader would naturally assume that a text which spoke of *hoi ouranioi* was referring to gods, not simply to the discoveries of a stargazer.

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